API Well Number: 43047545570000

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐

APPLICATION FOR PERMIT TO DRILL

1. WELL NAME and NUMBER
NBU 1022-9B4BS

2. TYPE OF WORK
DRILL NEW WELL ● REENTER P&A WELL ○ DEEPEN WELL ○

3. FIELD OR WILDCAT
NATURAL BUTTES

4. TYPE OF WELL
Gas Well Coalbed Methane Well: NO

5. UNIT or COMMUNITIZATION AGREEMENT NAME
NATURAL BUTTES

6. NAME OF OPERATOR
KERR-MCGEE OIL & GAS ONSHORE, L.P.

7. OPERATOR PHONE
720 929-6100

8. ADDRESS OF OPERATOR
P.O. Box 173779, Denver, CO, 80217

9. OPERATOR E-MAIL
Andy.Lytle@anadarko.com

10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)
UTU 01196-D

11. MINERAL OWNERSHIP
FEDERAL ● INDIAN ○ STATE ○ FEE ○

12. SURFACE OWNERSHIP
FEDERAL ● INDIAN ○ STATE ○ FEE ○

13. NAME OF SURFACE OWNER (if box 12 = 'fee')

14. SURFACE OWNER PHONE (if box 12 = 'fee')

15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')

16. SURFACE OWNER E-MAIL (if box 12 = 'fee')

17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')

18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS
YES ● (Submit Commingling Application) NO ○

19. SLANT
VERTICAL ○ DIRECTIONAL ● HORIZONTAL ○

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	412 FNL 517 FEL	NENE	9	10.0 S	22.0 E	S
Top of Uppermost Producing Zone	984 FNL 1448 FEL	NWNE	9	10.0 S	22.0 E	S
At Total Depth	984 FNL 1448 FEL	NWNE	9	10.0 S	22.0 E	S

21. COUNTY
UINTAH

22. DISTANCE TO NEAREST LEASE LINE (Feet)
984

23. NUMBER OF ACRES IN DRILLING UNIT
320

25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)
522

26. PROPOSED DEPTH
MD: 8999 TVD: 8826

27. ELEVATION - GROUND LEVEL
5137

28. BOND NUMBER
WYB000291

29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE
43-8496

Hole, Casing, and Cement Information

String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight
Surf	11	8.625	0 - 2350	28.0	J-55 LT&C	0.2	Type V	180	1.15	15.8
							Class G	270	1.15	15.8
Prod	7.875	4.5	0 - 8999	11.6	I-80 LT&C	12.0	Premium Lite High Strength	290	3.38	12.0
							50/50 Poz	1240	1.31	14.3

ATTACHMENTS

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES

- ☑ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER
- ☑ COMPLETE DRILLING PLAN
- ☐ AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)
- ☐ FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
- ☑ DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)
- ☑ TOPOGRAPHICAL MAP

NAME Joel Malefyt **TITLE** Regualtory Analyst **PHONE** 720 929-6828

SIGNATURE **DATE** 07/02/2014 **EMAIL** joel.malefyt@anadarko.com

API NUMBER ASSIGNED
43047545570000

APPROVAL
Permit Manager

RECEIVED: July 17, 2014

Kerr-McGee Oil & Gas Onshore. L.P.

NBU 1022-9B4BS

Surface:	412 FNL / 517 FEL	NENE
BHL:	984 FNL / 1448 FEL	NWNE

Section 9 T10S R22E

Unitah County, Utah
Mineral Lease: USA UTU 01196-D

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. & 2.a **Estimated Tops of Important Geologic Markers:**
Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

Formation	Depth	Resource
Uinta	0 - Surface	
Green River	1,102'	
Birds Nest	1,441'	Water
Mahogany	1,895'	Water
Wasatch	4,257'	Gas
Mesaverde	6,664'	Gas
Sego	8,826'	Gas
TVD =	8,826'	
TD =	8,999'	

2.b Kerr McGee Oil & Gas Onshore LP (Kerr McGee) may elect to drill to (i) the Blackhawk formation (part of the Mesaverde Group), (ii) to a shallower depth within the Mesaverde Group, or (iii) to the Wasatch Formation. If Kerr McGee drills to the Blackhawk formation, please refer to Blackhawk as the bottom formation. The attached Blackhawk Drilling Program includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the deeper formation.

If Kerr-McGee drills to a shallower depth in the Mesaverde Group or to the Wasatch Formation, please refer to the attached Wasatch/Mesaverde Drilling Program which includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the shallower formations.

3. **Pressure Control Equipment**

Please refer to the Standard Operating Practices on file with the BLM Vernal Field Office.

RECEIVED: July 01, 2014

4. Proposed Casing & Cementing Program:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

5. Drilling Fluids Program:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

6. Evaluation Program:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

7. Abnormal Conditions:

Wasach Formation/Mesaverde Group

Maximum anticipated bottom hole pressure calculated at 8826' TVD, approximately equals 5,384 psi (0.61 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 3,465 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-
(0.22 psi/ft-partial evac gradient x TVD of next csg point))

8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

9. Variances:

Please refer to the Standard Operating Practices on file with the BLM Vernal Field Office.

10. Other Information:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

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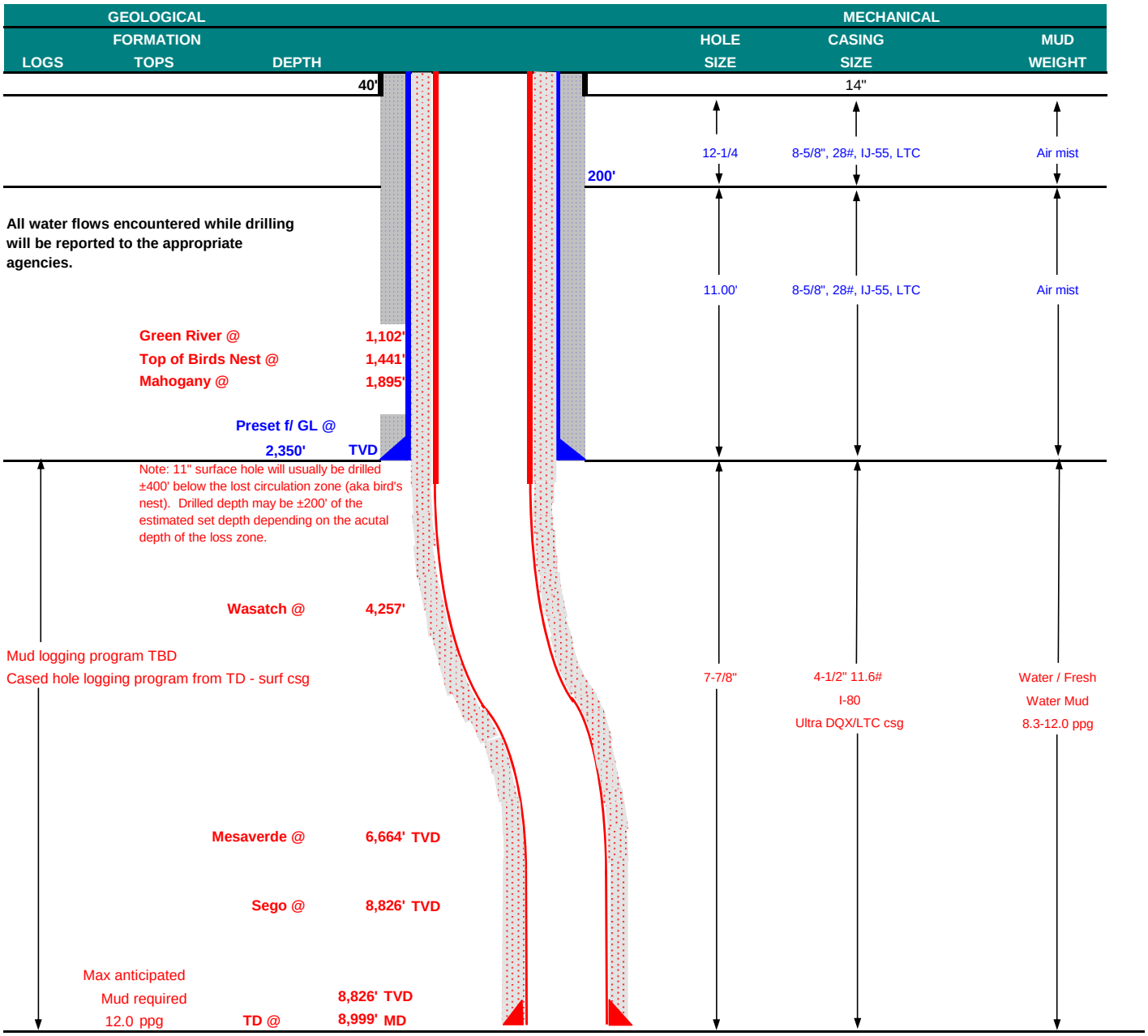
KerrMcGee

KERR-McGEE OIL & GAS ONSHORE LP

Wasatch/Mesaverde Drilling Program

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	January 20, 2014	
WELL NAME	**NBU 1022-9B4BS**		TD	8,826' TVD	8,999' MD
FIELD	Natural Buttes	COUNTY Uintah	STATE Utah	FINISHED ELEVATION	5,137'
SURFACE LOCATION	NENE	412 FNL	517 FEL	Sec 9	T 10S R 22E
	Latitude:	39.969654	Longitude:	-109.437214	NAD 83
BTM HOLE LOCATION	NWNE	984 FNL	1448 FEL	Sec 9	T 10S R 22E
	Latitude:	39.968059	Longitude:	-109.440534	NAD 83
OBJECTIVE ZONE(S)	Wasatch Formation/Mesaverde Group				
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), BLM(Surface), UDOGM Tri-County Health Dept.				



NBU 1022-9A PAD

KERR-McGEE OIL & GAS ONSHORE LP

Wasatch/Mesaverde Drilling Program

CASING PROGRAM

	SIZE	INTERVAL			WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	TENSION LTC	TENSION DQX
CONDUCTOR	14"	0-40'									
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	2,350	28.00	IJ-55	LTC	2.29	1.71	6.04	N/A
								7,780	6,350		267,035
PRODUCTION	4-1/2"	0	to	5,000	11.60	I-80	DQX	1.11	1.15		3.13
								7,780	6,350	223,000	
	4-1/2"	5,000	to	8,999'	11.60	I-80	LTC	1.11	1.15	5.89	

Surface Casing:

(Burst Assumptions: TD = 12.0 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.61 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT		YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80		1.15
Option 1			+ 0.25 pps flocele					
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80		1.15
			+ 2% CaCl + 0.25 pps flocele					
SURFACE			**NOTE: If well will circulate water to surface, option 2 will be utilized**					
Option 2	LEAD	1,850'	Premium cmt + 16% Gel + 10 pps gilsonite	230	35%	12.00		2.86
			+ 0.25 pps Flocele + 3% salt BWOC + GR 3 pps					
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80		1.15
			+ 0.25 pps Flocele + 3% salt BWOC + GR 3 pps					
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION	LEAD	3,749'	Premium Lite II +0.25 pps celloflake + .4% FL-52	290	35%	12.00		3.38
			+ .3% R-3 + .5 lbs/sk Kol-Seal + 6%Bentonite II +					
			1.2% Sodium Metasilicate + .05 lbs/sk Static Free					
	TAIL	5,250'	50/50 Poz/G + 10% salt + .05 lbs/sk Static Free	1,240	35%	14.30		1.31
			+ 1.2% Sodium Metasilicate + .5 % EC-1					
			+.002 gps FP-6L + 2% Bentonite II					

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well. 1 centralizer on the first 3 joints and one every third joint thereafter.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

IF extreme mud losses are observed OR cement doesn't reach surface on a well on the pad, a DV Tool may be used. With Cement Baskets above and Below it.

DRILLING ENGINEER: _____ **DATE:** _____

Eric Giles / Tyler Elliot / Frank Fernandez

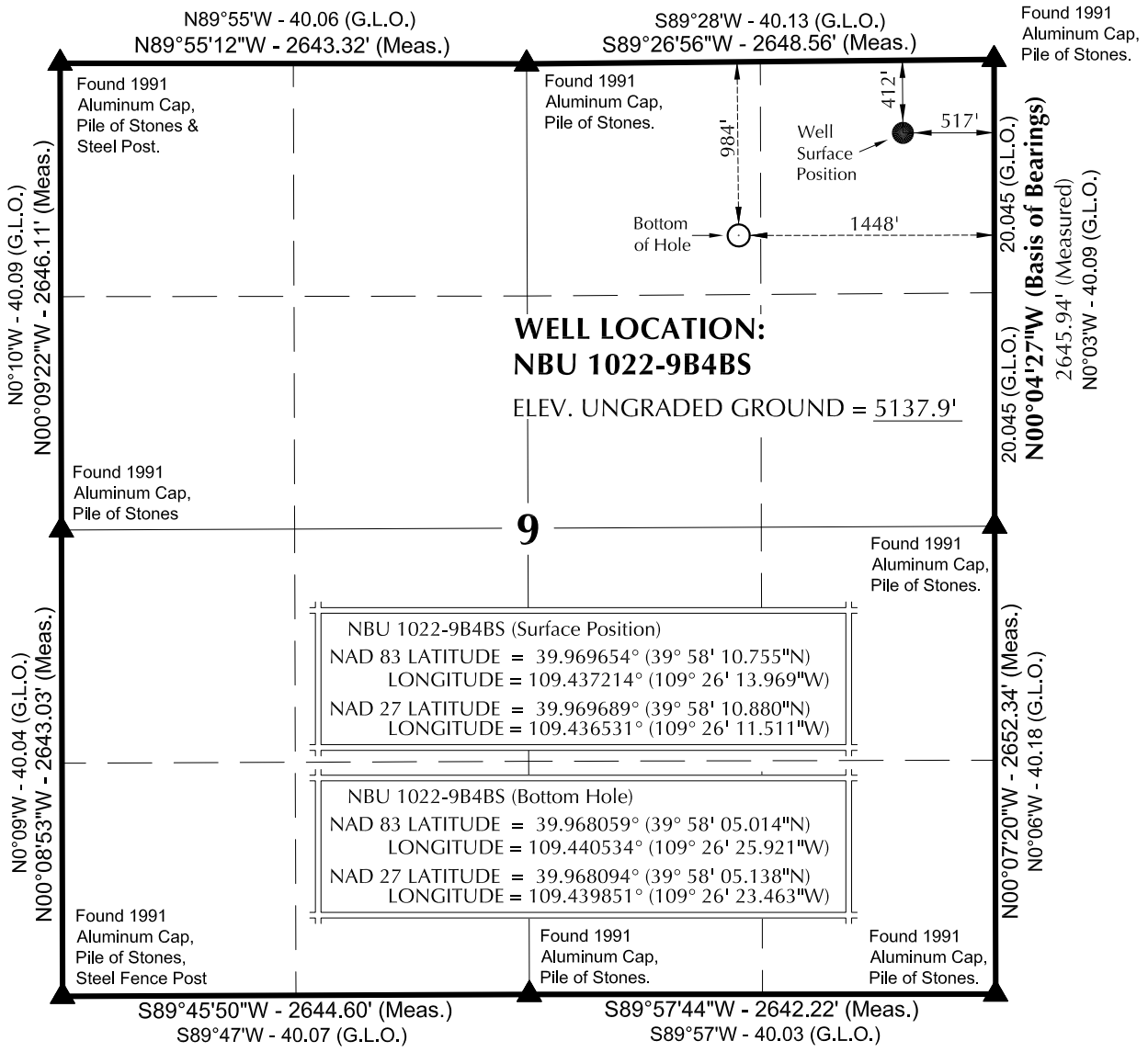
DRILLING SUPERINTENDENT: _____ **DATE:** _____

Kenny Gathings / Lovel Young

RECEIVED: July 01, 2014

API Well Number: 43047545570000

T10S, R22E, S.L.B.&M.



NOTES:

▲ = Section Corners Located

1. Well footages are measured at right angles to the Section Lines. G.L.O. distances are shown in feet or chains.
2. 1 chain = 66 feet.
3. The Bottom of hole bears S58°00'26"W 1097.33' from the Surface Position.
4. NAD 83 Latitude & Longitude are (CORS 96)(EPOCH:2002).
5. Bearings and Distances are based upon a Local Cartesian Grid, oriented to Geodetic North at the North 1/4 Corner of Section 8, T10S, R22E, S.L.B.&M. The Grid having a mean project height of 5300'. Lineal units used are U.S. Survey Foot.
6. Basis of elevation is Tri-Sta "Two Water" located in Lot 4 of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.

N

1000' 500' 0' 1000'

SCALE

SURVEYOR'S CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

PROFESSIONAL LAND SURVEYOR
REGISTRATION No. 6028691
STATE OF UTAH

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 1022-9A

NBU 1022-9B4BS
WELL PLAT
984' FNL, 1448' FEL (Bottom Hole)
NW ¼ NE ¼ OF SECTION 9, T10S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH.

609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 6-18-13	SURVEYED BY: J.W.	SHEET NO: 1
DATE DRAWN: 7-18-13	DRAWN BY: T.J.R.	
SCALE: 1" = 1000'	Date Last Revised:	1 OF 17

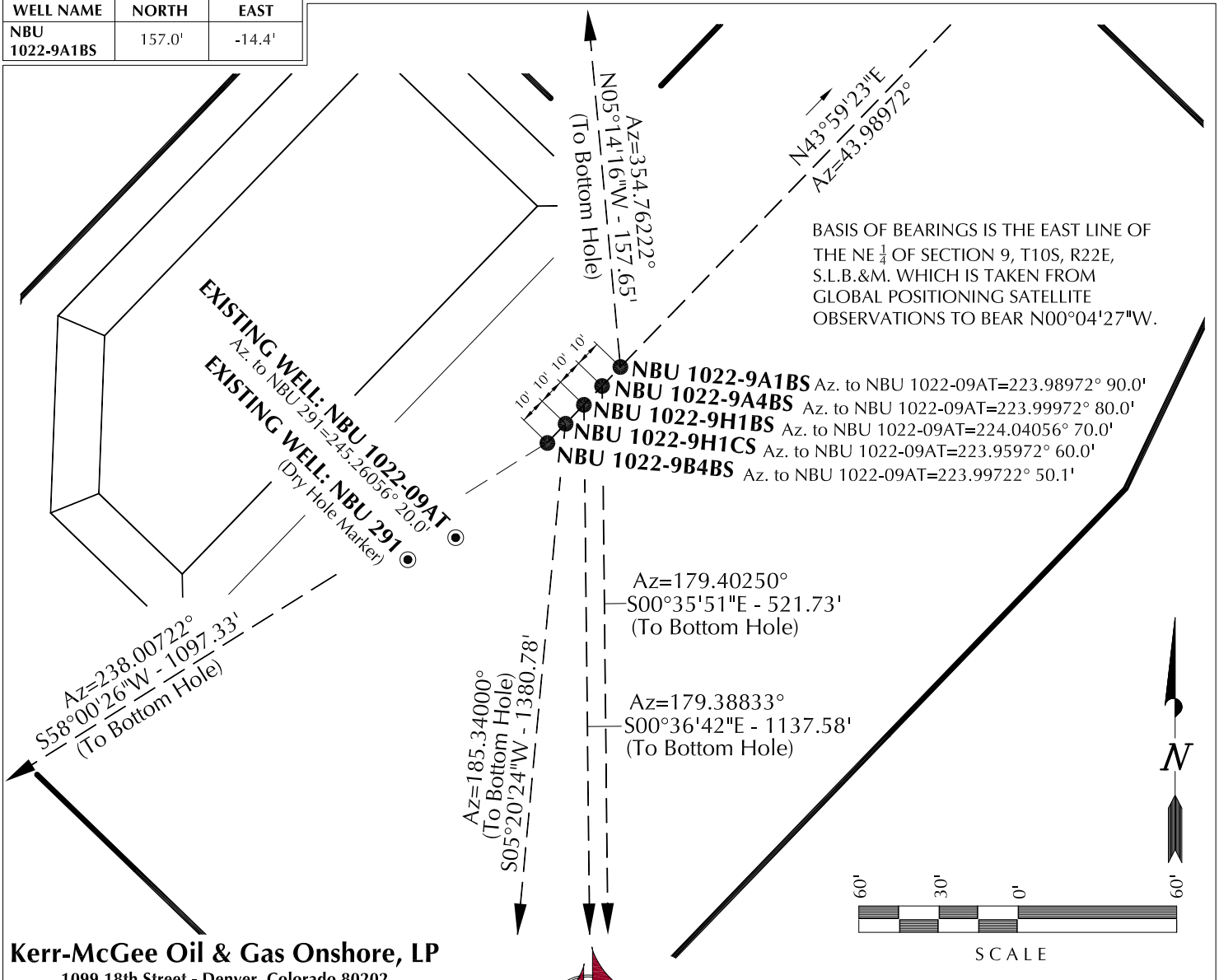
RECEIVED: July 01, 2014

API Well Number: 43047545570000

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27			NAD83		NAD27		
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES
NBU 1022-9B4BS	39°58'10.755"N 39.969654°N	109°26'13.969"W 109.437214°W	39°58'10.880"N 39.969689°N	109°26'11.511"W 109.436531°W	412' FNL 517' FEL	39°58'05.014"N 39.968059°N	109°26'25.921"W 109.440534°W	39°58'05.138"N 39.968094°N	109°26'23.463"W 109.439851°W	984' FNL 1448' FEL
NBU 1022-9H1CS	39°58'10.826"N 39.969674°N	109°26'13.881"W 109.437189°W	39°58'10.950"N 39.969708°N	109°26'11.423"W 109.436506°W	405' FNL 510' FEL	39°57'57.244"N 39.965901°N	109°26'15.536"W 109.437649°W	39°57'57.368"N 39.965935°N	109°26'13.078"W 109.436966°W	1778' FNL 640' FEL
NBU 1022-9H1BS	39°58'10.897"N 39.969694°N	109°26'13.791"W 109.437164°W	39°58'11.021"N 39.969728°N	109°26'11.332"W 109.436481°W	397' FNL 503' FEL	39°57'59.658"N 39.966572°N	109°26'13.639"W 109.437122°W	39°57'59.782"N 39.966606°N	109°26'11.181"W 109.436439°W	1535' FNL 492' FEL
NBU 1022-9A4BS	39°58'10.968"N 39.969713°N	109°26'13.702"W 109.437139°W	39°58'11.092"N 39.969748°N	109°26'11.244"W 109.436457°W	390' FNL 496' FEL	39°58'05.814"N 39.968282°N	109°26'13.634"W 109.437121°W	39°58'05.938"N 39.968316°N	109°26'11.176"W 109.436438°W	912' FNL 491' FEL
NBU 1022-9A1BS	39°58'11.039"N 39.969733°N	109°26'13.613"W 109.437115°W	39°58'11.163"N 39.969768°N	109°26'11.155"W 109.436432°W	383' FNL 489' FEL	39°58'12.590"N 39.970164°N	109°26'13.797"W 109.437166°W	39°58'12.715"N 39.970198°N	109°26'11.339"W 109.436483°W	226' FNL 503' FEL
NBU 1022-09AT	39°58'10.400"N 39.969555°N	109°26'14.416"W 109.437338°W	39°58'10.524"N 39.969590°N	109°26'11.957"W 109.436655°W	447' FNL 551' FEL					
NBU 291	39°58'10.317"N 39.969533°N	109°26'14.649"W 109.437402°W	39°58'10.441"N 39.969567°N	109°26'12.190"W 109.436720°W	455' FNL 570' FEL					

RELATIVE COORDINATES - From Surface Position to Bottom Hole

WELL NAME	NORTH	EAST
NBU 1022-9B4BS	-581.4'	-930.7'
NBU 1022-9H1CS	-1374.8'	-128.5'
NBU 1022-9H1BS	-1137.5'	12.1'
NBU 1022-9A4BS	-521.7'	5.4'
NBU 1022-9A1BS	157.0'	-14.4'



Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 1022-9A

WELL PAD INTERFERENCE PLAT
WELLS - NBU 1022-9B4BS, NBU 1022-9H1CS, NBU 1022-9H1BS, NBU 1022-9A4BS & NBU 1022-9A1BS
LOCATED IN SECTION 9, T10S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH.

609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 6-18-13	SURVEYED BY: J.W.	SHEET NO: 6
DATE DRAWN: 7-18-13	DRAWN BY: T.J.R.	6 OF 17
SCALE: 1" = 60'	Date Last Revised:	

RECEIVED: July 01, 2014

API Well Number: 43047545570000

EXISTING ACCESS ROAD

EXISTING 4" GAS PIPELINE

PROPOSED 4" SURFACE GAS PIPELINE RE-ROUTE

SE1/4, SEC. 4, T10S, R22E
NE1/4, SEC. 9, T10S, R22E

TOPSOIL STOCKPILE

RESERVE PIT & EXCESS CUT STOCKPILE

RESERVE PIT & EXCESS CUT STOCKPILE

RESERVE PIT
12' DEPTH
SLOPE 1.5:1

TOPSOIL STOCKPILE

CLASS D COUNTY ROAD

EXISTING 4" GAS PIPELINE

BURIED 10" GAS 6" (MAX.) LIQUID

CONSTRUCT DIVERSION DITCH (AS NEEDED)

EXISTING POND

EXISTING WELL PAD

NBU 1022-9A1BS
NBU 1022-9A4BS
NBU 1022-9H1BS
NBU 1022-9H1CS
NBU 1022-9B4BS

EXISTING WELL: NBU 1022-09AT

EXISTING WELL: NBU 291 (PLUGGED AND ABANDONED)

N05°14'16"W - 157.65' (TO BOTTOM HOLE)

S00°35'51"E - 521.73' (TO BOTTOM HOLE)

S00°36'42"E - 1137.58' (TO BOTTOM HOLE)

S38°00'26"W - 1092.33' (TO BOTTOM HOLE)

S05°20'24"W - 1380.78' (TO BOTTOM HOLE)

PLEASE NOTE: LOCATIONS OF PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.

WELL PAD - NBU 1022-9A DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5137.9'
FINISHED GRADE ELEVATION = 5137.3'
CUT SLOPES = 1.5:1
FILL SLOPES = 1.5:1
TOTAL WELL PAD AREA = 3.49 ACRES
TOTAL DISTURBANCE AREA = 5.02 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 13,239 C.Y.
TOTAL FILL FOR WELL PAD = 11,811 C.Y.
TOPSOIL @ 6" DEPTH = 1,915 C.Y.
EXCESS MATERIAL = 1,428 C.Y.

RESERVE PIT QUANTITIES

TOTAL CUT FOR RESERVE PIT
+/- 9,160 C.Y.
RESERVE PIT CAPACITY (2' OF FREEBOARD)
+/- 35,050 BARRELS

WELL PAD - NBU 1022-9A

WELL PAD - LOCATION LAYOUT
NBU 1022-9B4BS,
NBU 1022-9H1CS, NBU 1022-9H1BS,
NBU 1022-9A4BS & NBU 1022-9A1BS
LOCATED IN SECTION 9, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

TIMBERLINE ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078
(435) 789-1365

WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL — PROPOSED PIPELINE
- EPL — EXISTING PIPELINE

HORIZONTAL 0 30' 60' 1" = 60'
2' CONTOURS

SCALE: 1"=60' | DATE: 7/25/13 | SHEET NO: 7
REVISED: JID 11/18/13 | 7 OF 17

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API Well Number: 43047545570000

EXISTING ACCESS ROAD

EXISTING 4" GAS PIPELINE

PROPOSED 4" SURFACE GAS PIPELINE RE-ROUTE

SE1/4, SEC. 4, T10S, R22E
NE1/4, SEC. 9, T10S, R22E

TOPSOIL STOCKPILE

COMPLETIONS PIT & EXCESS CUT STOCKPILE

COMPLETIONS PIT & EXCESS CUT STOCKPILE

COMPLETIONS PIT (CUTTINGS AREA) 12' DEPTH SLOPE 1.5:1

TOPSOIL STOCKPILE

FILL

CUT

N05°14'16"W - 157.65' (TO BOTTOM HOLE)

S00°35'51"E - 521.73' (TO BOTTOM HOLE)

S00°36'42"E - 1137.58' (TO BOTTOM HOLE)

S38°00'26"W - 1097.33' (TO BOTTOM HOLE)

S05°20'24"W - 1380.78' (TO BOTTOM HOLE)

NBU 1022-9A1BS
NBU 1022-9A4BS
NBU 1022-9H1BS
NBU 1022-9H1CS
NBU 1022-9B4BS

EXISTING WELL: NBU 1022-09AT

EXISTING WELL: NBU 291 (PLUGGED AND ABANDONED)

EXISTING WELL PAD

EXISTING TANK AND BERM

EXISTING SEPARATOR

PIPERACKS

DERRICK STAND

CLOSED LOOP EQUIPMENT

WATER TANK

MUD TANK

MUD PUMP

GENERATOR

DIESEL TANK

BOILER

CLASS D COUNTY ROAD

CONSTRUCT DIVERSION DITCH (AS NEEDED)

EXISTING POND

EXISTING 4" GAS PIPELINE

BURIED 10" GAS 6" (MAX.) LIQUID

PLEASE NOTE: LOCATIONS OF PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.

WELL PAD - NBU 1022-9A (CLOSED LOOP) DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5137.9'
FINISHED GRADE ELEVATION = 5137.3'
CUT SLOPES = 1.5:1
FILL SLOPES = 1.5:1
TOTAL WELL PAD AREA = 3.49 ACRES
TOTAL DISTURBANCE AREA = 5.02 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 1022-9A

WELL PAD - LOCATION LAYOUT
NBU 1022-9B4BS,
NBU 1022-9H1CS, NBU 1022-9H1BS,
NBU 1022-9A4BS & NBU 1022-9A1BS
LOCATED IN SECTION 9, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 13,239 C.Y.
TOTAL FILL FOR WELL PAD = 11,811 C.Y.
TOPSOIL @ 6" DEPTH = 1,915 C.Y.
EXCESS MATERIAL = 1,428 C.Y.

COMPLETIONS PIT QUANTITIES

TOTAL CUT FOR COMPLETIONS PIT
+/- 7,270 C.Y.
COMPLETIONS PIT CAPACITY
(2' OF FREEBOARD)
+/- 27,610 BARRELS

WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL — PROPOSED PIPELINE
- EPL — EXISTING PIPELINE

HORIZONTAL 0 30' 60' 1" = 60'
2' CONTOURS

TIMBERLINE ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078
(435) 789-1365

SCALE: 1"=60' | DATE: 11/18/13 | SHEET NO: 7B 7B OF 17
REVISED:

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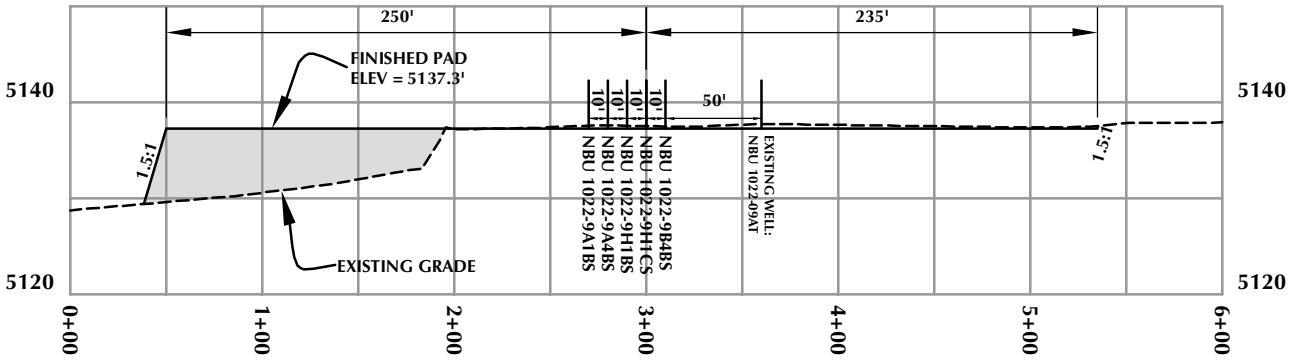
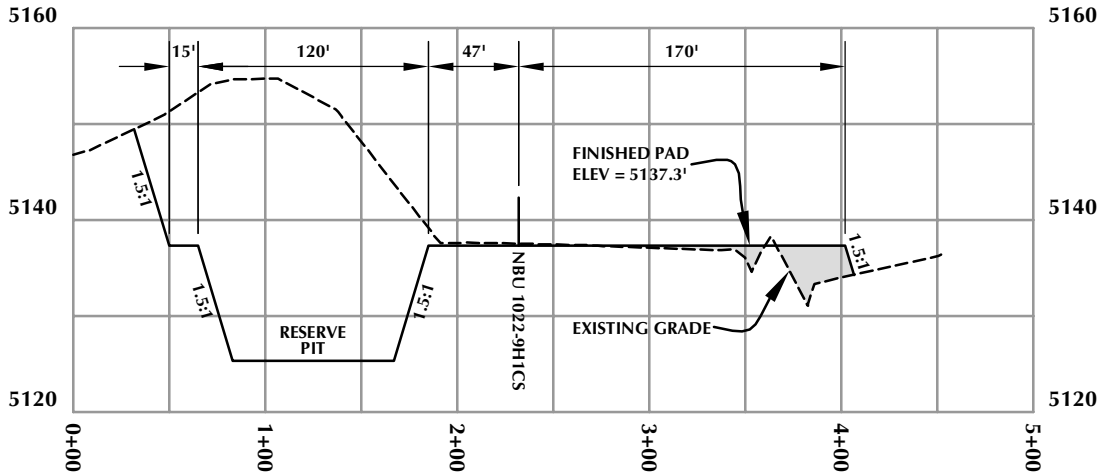
RECEIVED: July 01, 2014



CROSS SECTION A-A'



CROSS SECTION B-B'

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 1022-9A

WELL PAD - CROSS SECTIONS
NBU 1022-9B4BS,
NBU 1022-9H1CS, NBU 1022-9H1BS,
NBU 1022-9A4BS & NBU 1022-9A1BS
LOCATED IN SECTION 9, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

609
CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

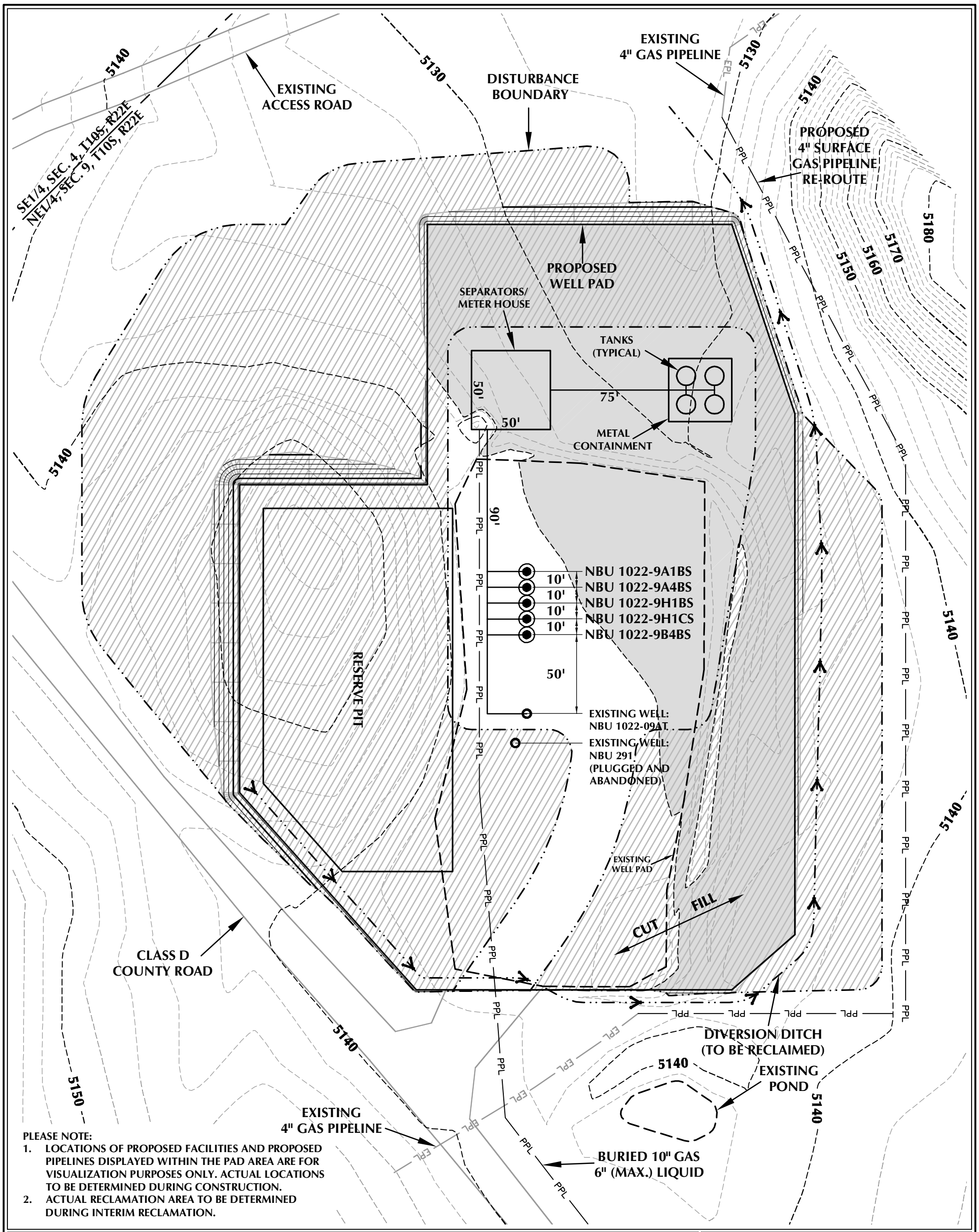
HORIZONTAL 0 50' 100' 1" = 100'
VERTICAL 0 10' 20' 1" = 20'

TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

SCALE: 1"=100' | DATE: 7/25/13 | SHEET NO: 8 8 OF 17
REVISED:

K:\ANADARKO\2013\2013_55_NBU_1022-9_FOCUS\DWGS\NBU 1022-9A\NBU 1022-9A.dwg 7/26/2013 3:19:17 PM jacob

API Well Number: 43047545570000



PLEASE NOTE:
1. LOCATIONS OF PROPOSED FACILITIES AND PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.
2. ACTUAL RECLAMATION AREA TO BE DETERMINED DURING INTERIM RECLAMATION.

WELL PAD - NBU 1022-9A RECLAMATION DESIGN SUMMARY

TOTAL DISTURBANCE AREA = 5.02 ACRES (INCLUDING EXISTING)
RECLAMATION AREA = 3.77 ACRES
TOTAL WELL PAD AREA AFTER RECLAMATION = 1.25 ACRES

WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL — PROPOSED PIPELINE
- EPL — EXISTING PIPELINE
- RECLAMATION AREA

HORIZONTAL 0 30' 60' 1" = 60'
2' CONTOURS

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 1022-9A

WELL PAD - RECLAMATION LAYOUT
NBU 1022-9B4BS,
NBU 1022-9H1CS, NBU 1022-9H1BS,
NBU 1022-9A4BS & NBU 1022-9A1BS
LOCATED IN SECTION 9, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

TIMBERLINE ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078
(435) 789-1365

SCALE: 1"=60' | DATE: 7/25/13 | SHEET NO: 9 (9 OF 17)
REVISED: JID 11/18/13

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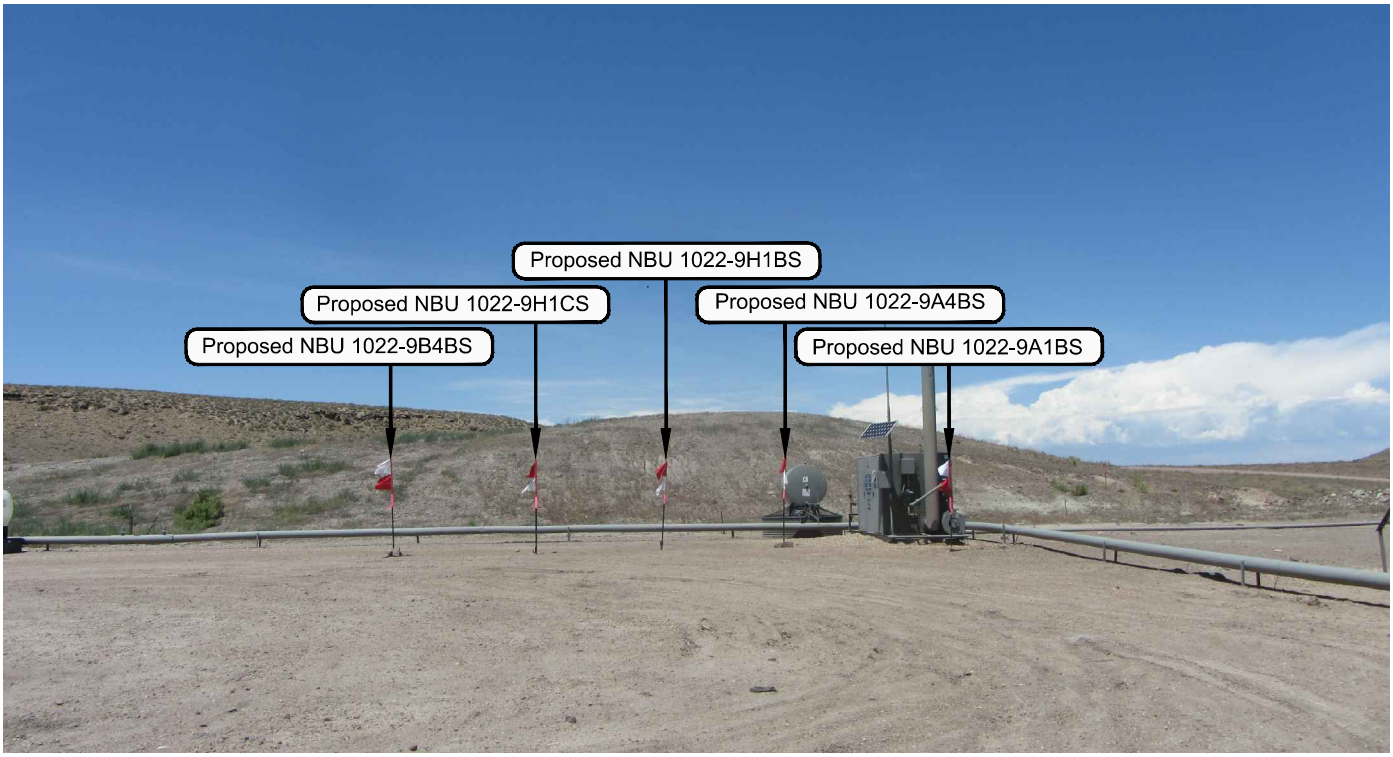


PHOTO VIEW: FROM LOCATION STAKES TO PIT CORNER D **CAMERA ANGLE: NORTHWESTERLY**

PHOTO VIEW: FROM EXISTING ACCESS ROAD **CAMERA ANGLE: EASTERLY**

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 1022-9A

LOCATION PHOTOS
NBU 1022-9B4BS,
NBU 1022-9H1CS, NBU 1022-9H1BS,
NBU 1022-9A4BS & NBU 1022-9A1BS
LOCATED IN SECTION 9, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH.

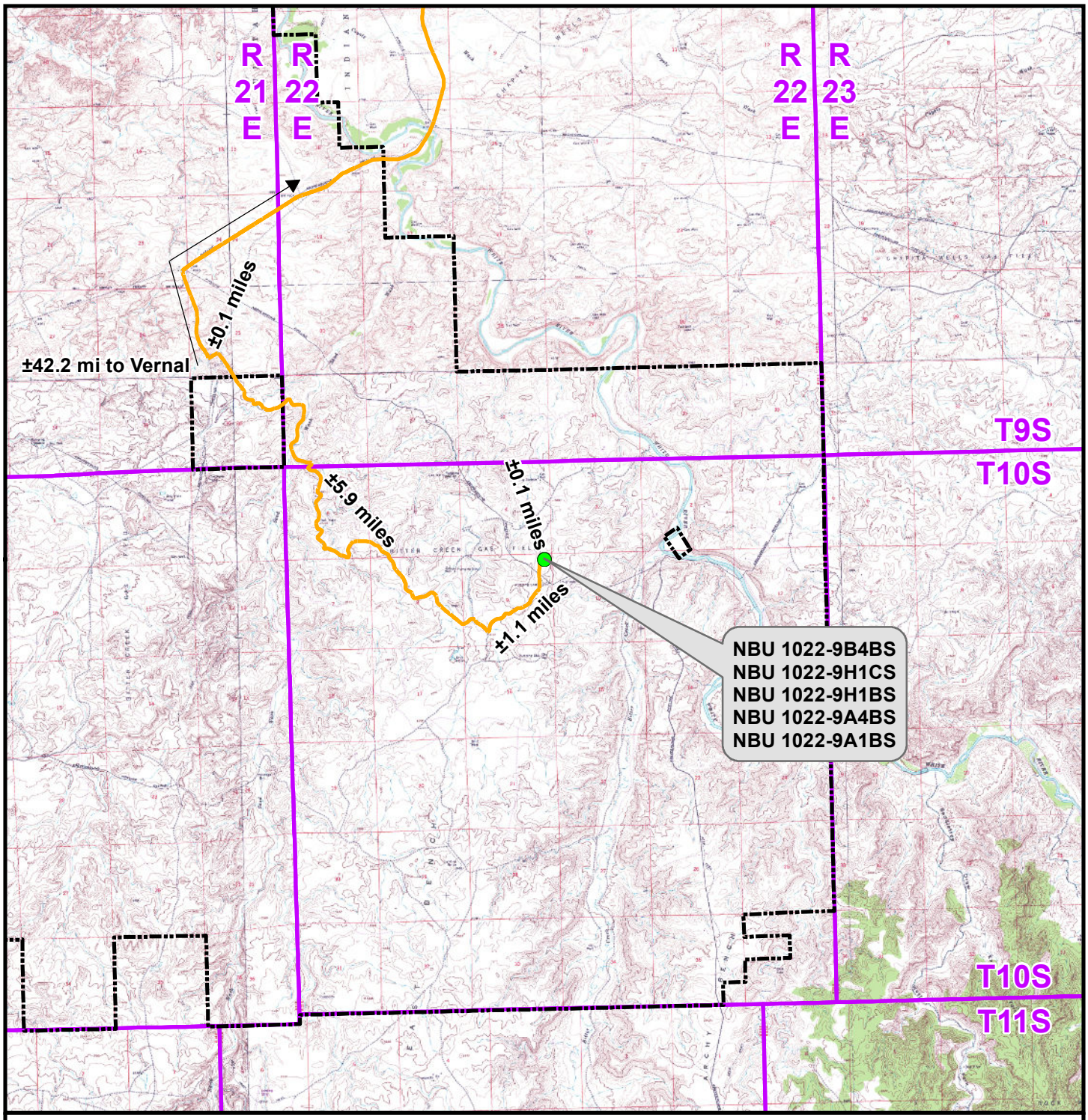
609
CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN: 6-18-13	PHOTOS TAKEN BY: J.W.	SHEET NO: 10
DATE DRAWN: 7-18-13	DRAWN BY: T.J.R.	10 OF 17
Date Last Revised:		

RECEIVED: July 01, 2014

API Well Number: 43047545570000



Legend

Distance From Well Pad - NBU 1022-9A To Unit Boundary: ±7,083ft

- Proposed Well Location
- Natural Buttes Unit Boundary
- Access Route - Proposed

WELL PAD - NBU 1022-9A

TOPO A
NBU 1022-9B4BS,
NBU 1022-9H1CS, NBU 1022-9H1BS
NBU 1022-9A4BS & NBU 1022-9A1BS
LOCATED IN SECTION 9, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

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SCALE: 1:100,000	NAD83 USP Central	SHEET NO: 11
DRAWN: TL	DATE: 26 July 2013	11 OF 17
REVISED:	DATE:	

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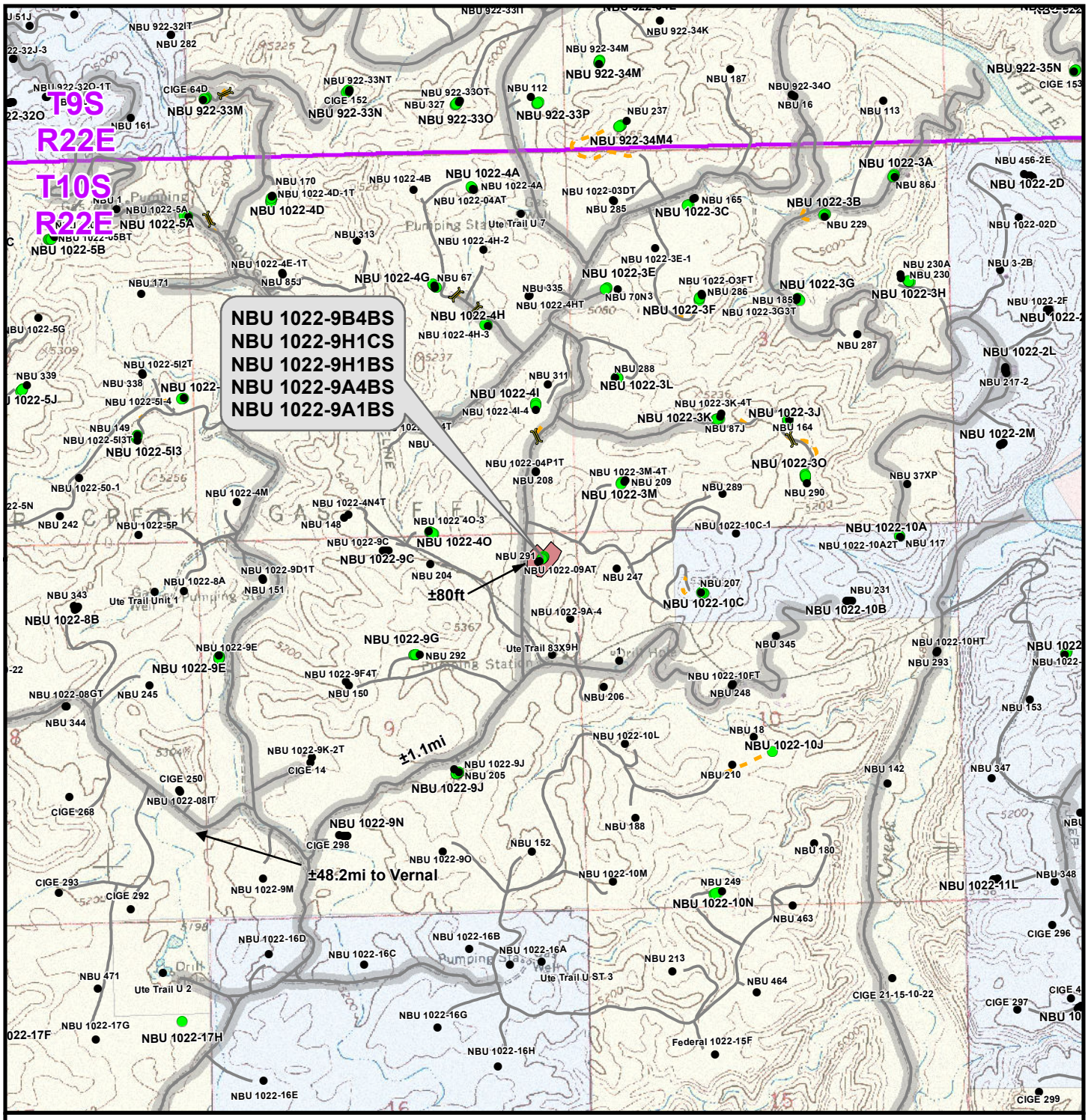
RECEIVED: July 01, 2014

API Well Number: 43047545570000



Legend

- Well - Proposed
- Well - Existing
- Well Pad
- Road - Proposed
- Road - Existing
- County Road
- Culvert/LWC - Proposed
- Bureau of Land Management
- Indian Reservation
- State
- Private

Total Proposed Road Length: ±0ft

WELL PAD - NBU 1022-9A

TOPO B
NBU 1022-9B4BS,
NBU 1022-9H1CS, NBU 1022-9H1BS
NBU 1022-9A4BS & NBU 1022-9A1BS
LOCATED IN SECTION 9, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 12
DRAWN: TL	DATE: 22 July 2013	12 OF 17
REVISED:	DATE:	

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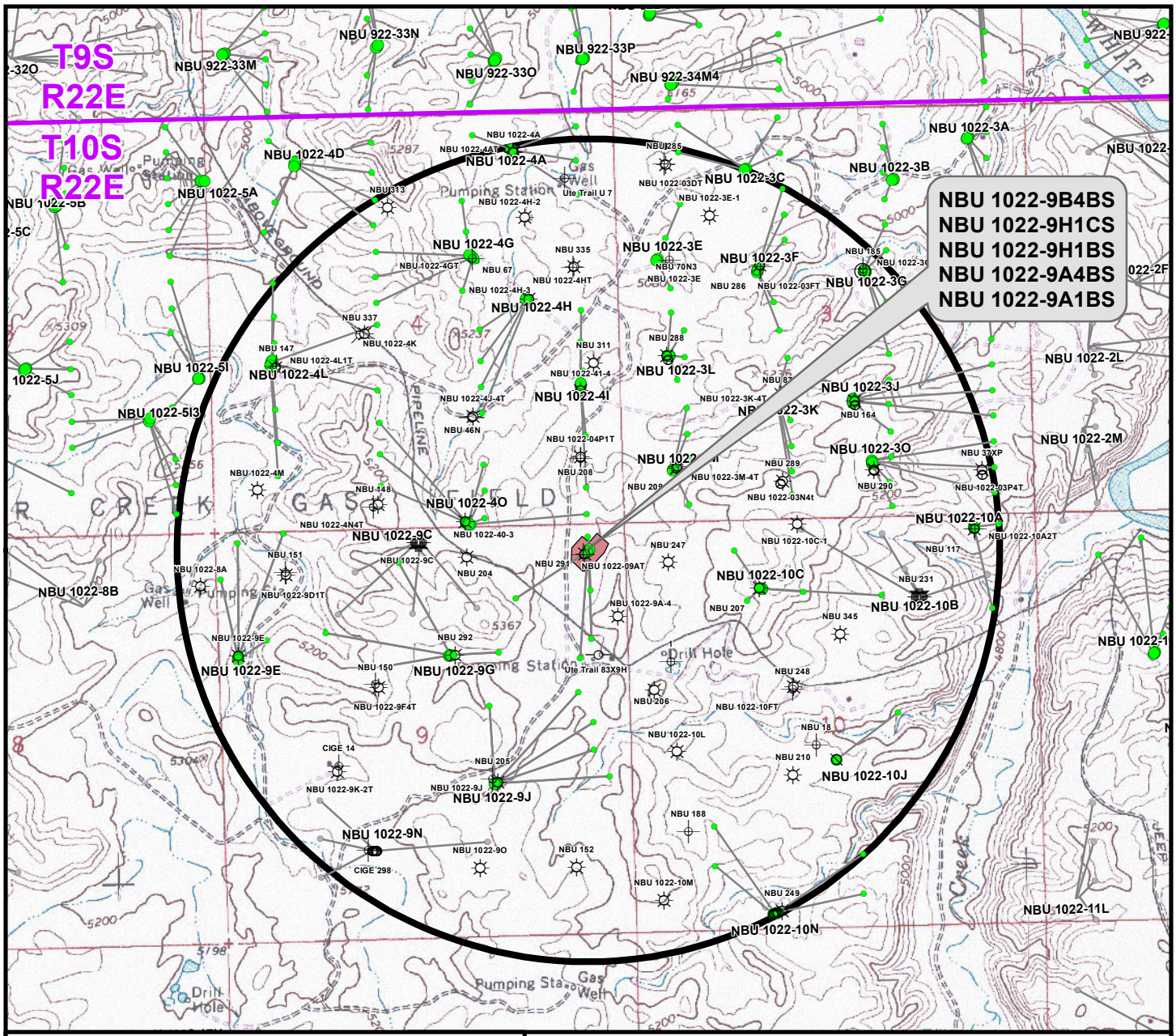

Well locations derived from Utah Division of Oil, Gas and Mining (UDOGM) (oilgas.ogm.utah.gov). The estimated distances from proposed bore locations to the nearest existing bore locations are based on UDOGM data.

Proposed Well	Nearest Well Bore	Footage
NBU 1022-9B4BS	NBU 1022-9B4CS BH	±522ft
NBU 1022-9H1CS	Ute Trail 83X9H	±231ft
NBU 1022-9H1BS	Ute Trail 83X9H	±224ft
NBU 1022-9A4BS	NBU 291	±462ft
NBU 1022-9A1BS	NBU 1022-09AT	±227ft

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Well - 1 Mile Radius
- Producing
- Spudded
- APD Approved
- Preliminary Location
- Deferred
- Cancelled
- Temporarily Abandoned
- Active Injector
- Location Abandoned
- Plugged & Abandoned
- Shut-In

WELL PAD - NBU 1022-9A

TOPO C
NBU 1022-9B4BS,
NBU 1022-9H1CS, NBU 1022-9H1BS
NBU 1022-9A4BS & NBU 1022-9A1BS
LOCATED IN SECTION 9, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

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Denver, Colorado 80202

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Sheridan, Wyoming 82801
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Fax 307-674-0182

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SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 13
DRAWN: TL	DATE: 18 Nov 2013	13 OF 17
REVISED:	DATE:	

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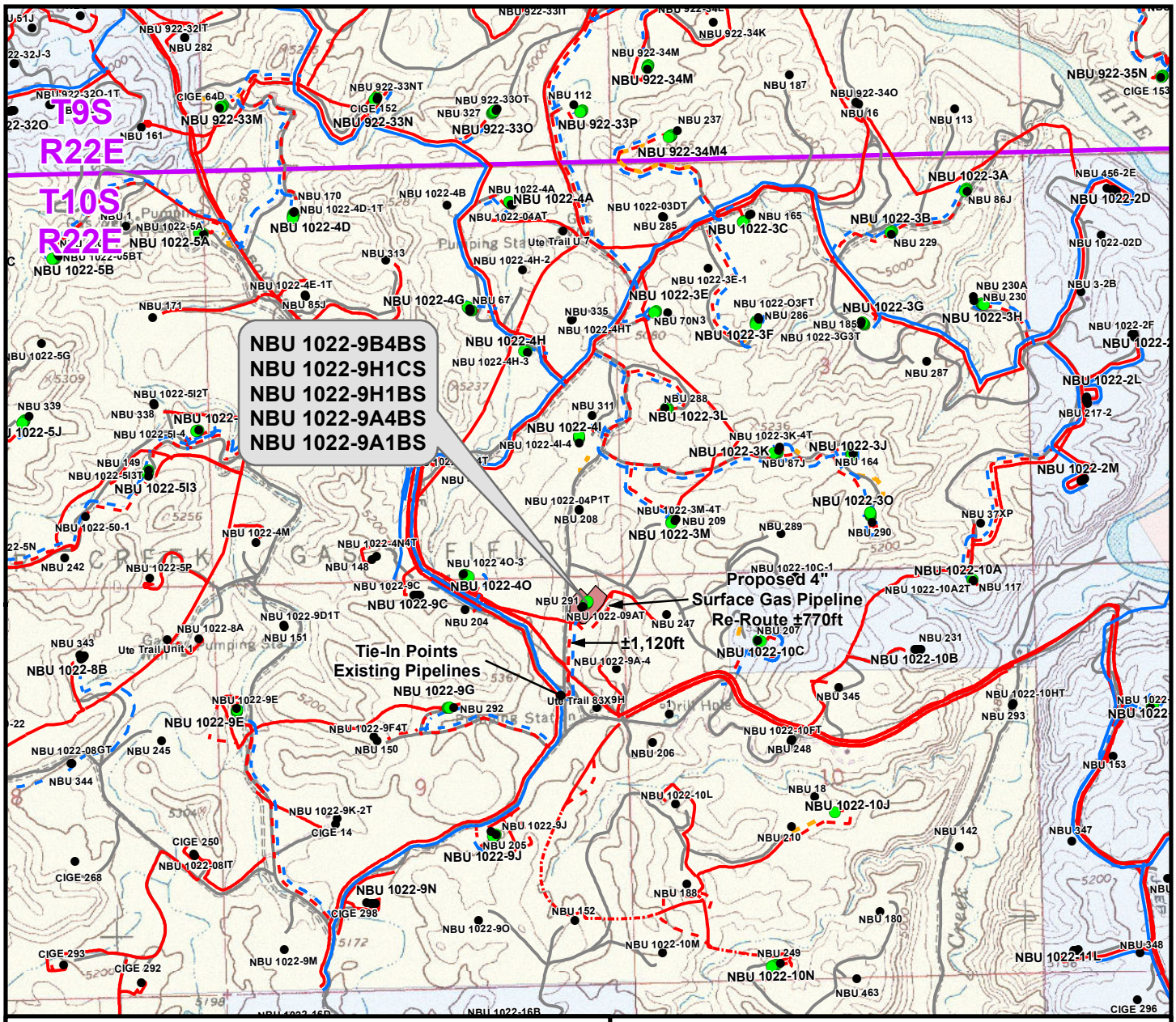

Proposed Liquid Pipeline	Length
Buried 6"(Max.) (Separator to Edge of Pad)	±360ft
Buried 6"(Max.) (Edge of Pad to Existing 6" Liquid Pipeline)	±1,120ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±1,480ft

Proposed Gas Pipeline	Length
Buried 10" (Meter House to Edge of Pad)	±360ft
Buried 10" (Edge of Pad to Existing 16" Gas Pipeline)	±1,120ft
Surface 4" (Proposed Pipeline Re-Route)	±770ft
TOTAL PROPOSED BURIED GAS PIPELINE =	±1,480ft
TOTAL PROPOSED SURFACE GAS PIPELINE =	±770ft

Legend

Well - Proposed; Well - Existing; Well Pad; Gas Pipeline - Proposed; Gas Pipeline - To Be Upgraded; Gas Pipeline - Existing; Liquid Pipeline - Proposed; Liquid Pipeline - Existing; Road - Proposed; Road - Existing; Bureau of Land Management; Indian Reservation; State; Private

WELL PAD - NBU 1022-9A

TOPO D
NBU 1022-9B4BS,
NBU 1022-9H1CS, NBU 1022-9H1BS
NBU 1022-9A4BS & NBU 1022-9A1BS
LOCATED IN SECTION 9, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

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SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO:	14
DRAWN: TL	DATE: 18 Nov 2013		14 OF 17
REVISED:	DATE:		

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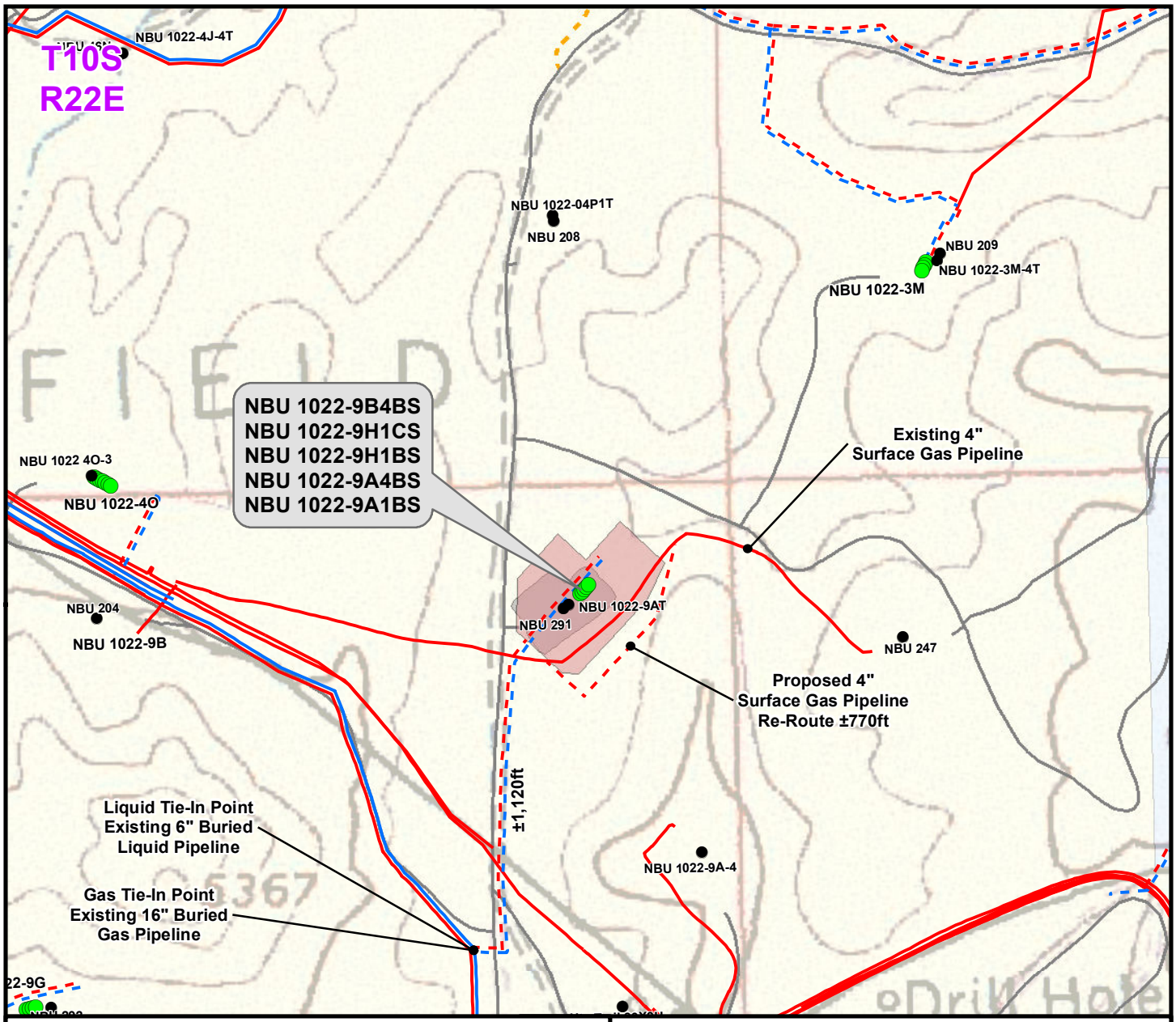
API Well Number: 43047545570000



Proposed Liquid Pipeline	Length
Buried 6"(Max.) (Separator to Edge of Pad)	±360ft
Buried 6"(Max.) (Edge of Pad to Existing 6" Liquid Pipeline)	±1,120ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±1,480ft

Proposed Gas Pipeline	Length
Buried 10" (Meter House to Edge of Pad)	±360ft
Buried 10" (Edge of Pad to Existing 16" Gas Pipeline)	±1,120ft
Surface 4" (Proposed Pipeline Re-Route)	±770ft
TOTAL PROPOSED BURIED GAS PIPELINE =	±1,480ft
TOTAL PROPOSED SURFACE GAS PIPELINE =	±770ft

Legend

- Well - Proposed
- Well - Existing
- Well Pad - Proposed
- Well Pad - Existing
- Gas Pipeline - Proposed
- Gas Pipeline - To Be Upgraded
- Gas Pipeline - Existing
- Liquid Pipeline - Proposed
- Liquid Pipeline - Existing
- Road - Proposed
- Road - Existing
- Bureau of Land Management
- Indian Reservation
- State
- Private

WELL PAD - NBU 1022-9A

TOPO D2 (PAD & PIPELINE DETAIL)
NBU 1022-9B4BS,
NBU 1022-9H1CS, NBU 1022-9H1BS
NBU 1022-9A4BS & NBU 1022-9A1BS
LOCATED IN SECTION 9, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 500ft	NAD83 USP Central	SHEET NO: 15	15 OF 17
DRAWN: TL	DATE: 22 July 2013		
REVISED: TL	DATE: 18 Nov 2013		

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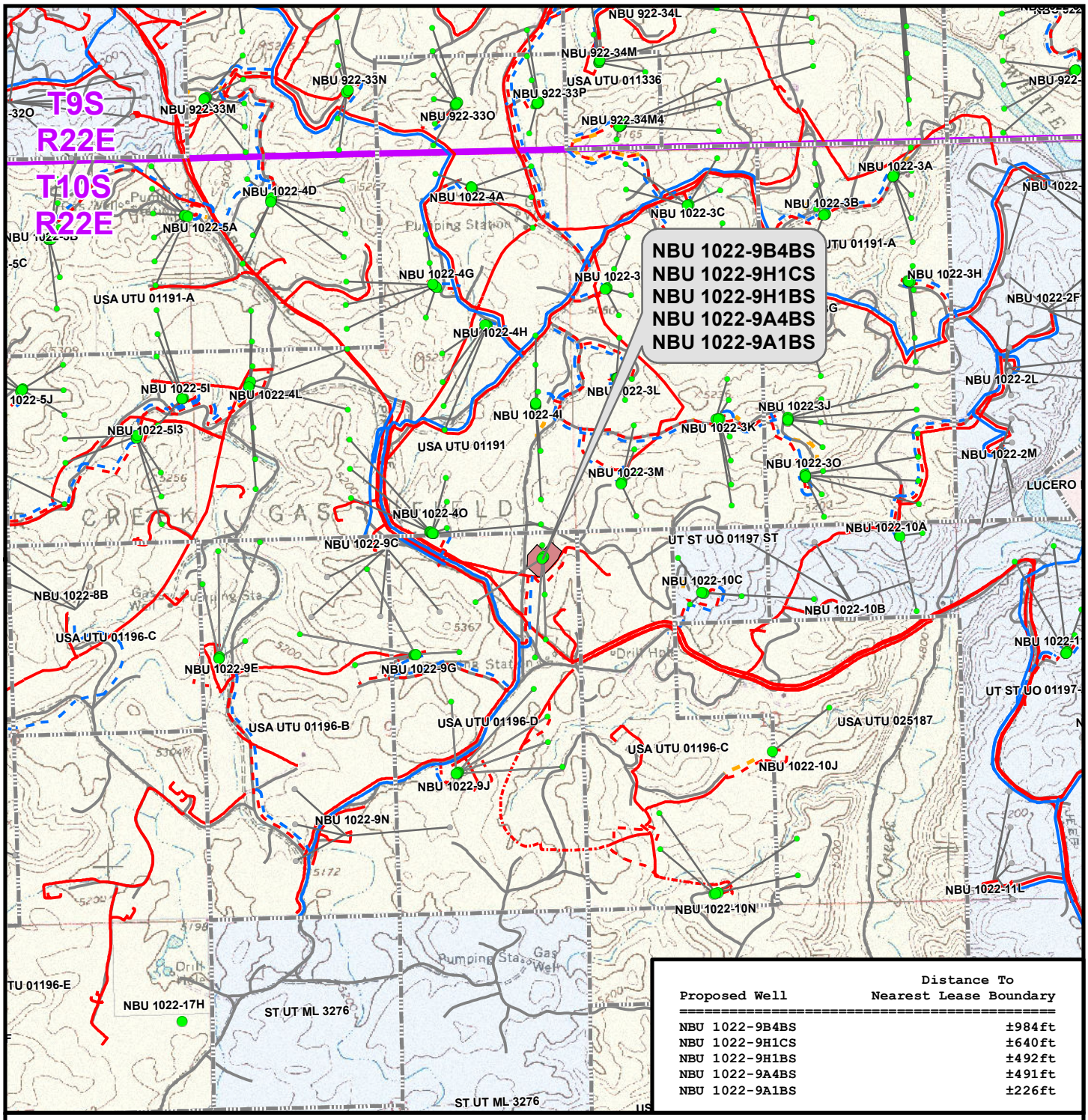
RECEIVED: July 01, 2014

API Well Number: 43047545570000



Proposed Well	Distance To Nearest Lease Boundary
NBU 1022-9B4BS	±984ft
NBU 1022-9H1CS	±640ft
NBU 1022-9H1BS	±492ft
NBU 1022-9A4BS	±491ft
NBU 1022-9A1BS	±226ft

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Lease Boundary
- Gas Pipeline - Proposed
- Gas Pipeline - To Be Upgraded
- Gas Pipeline - Existing
- Liquid Pipeline - Proposed
- Liquid Pipeline - Existing
- Road - Proposed
- Road - Existing
- Bureau of Land Management
- Indian Reservation
- State
- Private

WELL PAD - NBU 1022-9A

TOPO E
NBU 1022-9B4BS,
NBU 1022-9H1CS, NBU 1022-9H1BS
NBU 1022-9A4BS & NBU 1022-9A1BS
LOCATED IN SECTION 9, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

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2155 North Main Street
Sheridan, Wyoming 82801
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Fax 307-674-0182

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SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 16	
DRAWN: TL	DATE: 18 Nov 2013	16 OF 17	
REVISED:	DATE:		

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Kerr-McGee Oil & Gas Onshore, LP
WELL PAD – NBU 1022-9A
WELLS - NBU 1022-9B4BS,
NBU 1022-9H1CS, NBU 1022-9H1BS,
NBU 1022-9A4BS & NBU 1022-9A1BS
SECTION 9, T10S, R22E, S.L.B.&M.,
UINTAH COUNTY, UTAH

From the intersection of U.S. Highway 40 and 500 East street in Vernal, Utah, proceed in an easterly, then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45; exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 18.7 miles to a Class D County Road to the northeast. Exit left and proceed in a northeasterly direction along the Class D County Road approximately 0.1 miles to a second Class D County Road to the southeast. Exit right and proceed in a southeasterly direction along the second Class D County Road approximately 5.9 miles to a third Class D County Road to the northeast. Exit left and proceed in a northeasterly direction along the third Class D County Road approximately 1.1 miles to a service road to the east. Exit right and proceed in an easterly direction approximately 80 feet to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 49.3 miles in a southerly direction.

RECEIVED: July 01, 2014

API Well Number: 43047545570000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9A PAD
Well: NBU 1022-9B4BS
Wellbore: OH
Design: PLAN #1 PRELIMINRAY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.80°

Magnetic Field
Strength: 51981.7snT
Dip Angle: 65.78°
Date: 1/3/2014
Model: BGGM2013

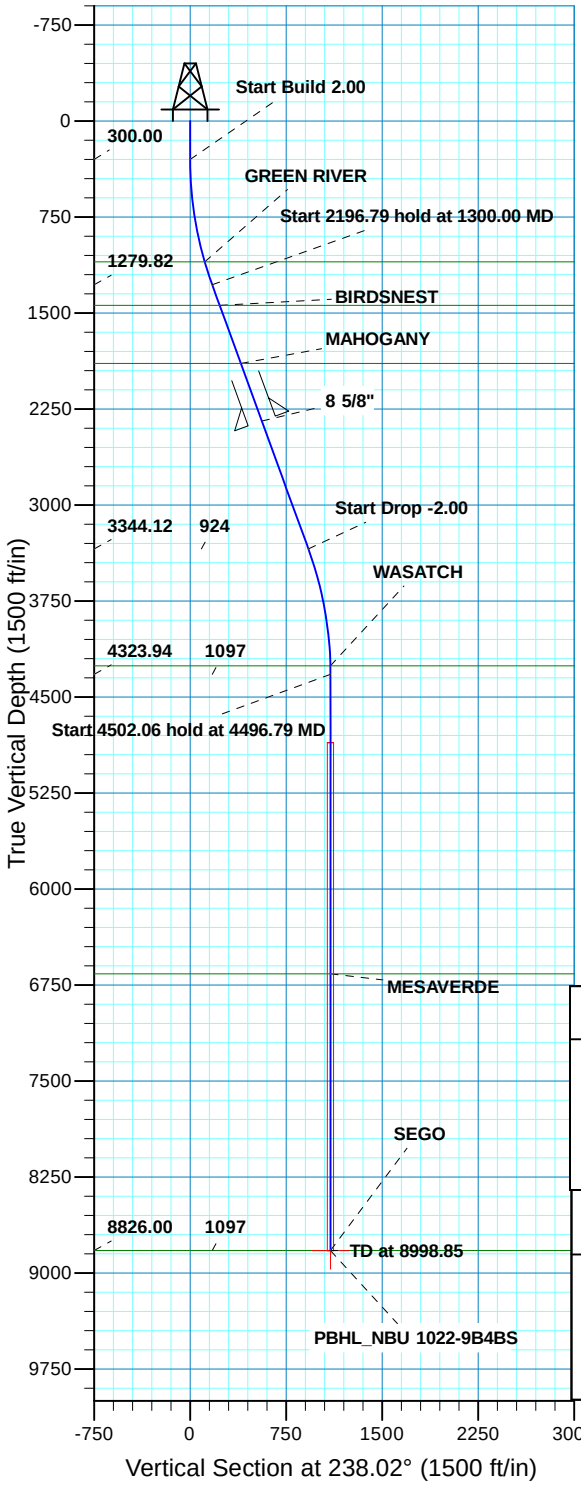
WELL DETAILS: NBU 1022-9B4BS

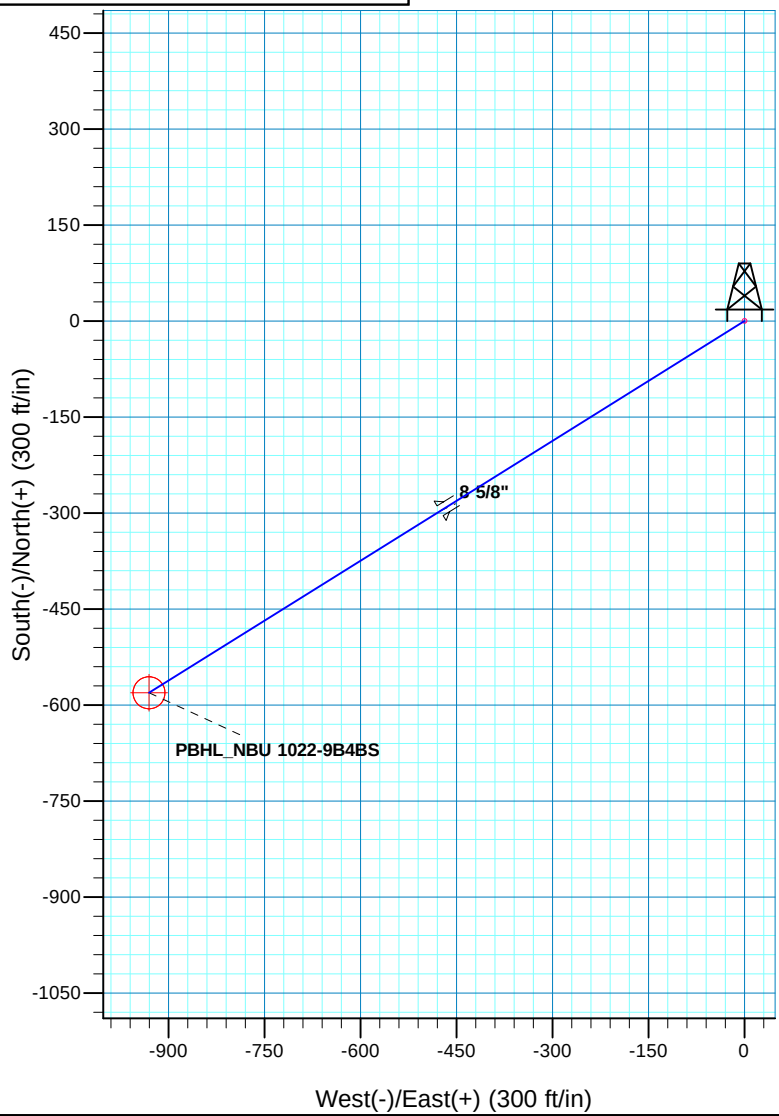
GL 5137 & KB 4 @ 5141.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14518847.11	2078482.30	39.9696890	-109.4365310

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL - plan hits target center	8826.00	-580.90	-930.43	14518249.99	2077562.19	39.9680940	-109.4398510	Circle (Radius: 25.00)





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1300.00	20.00	238.02	1279.82	-91.50	-146.55	2.00	238.02	172.77	
3496.79	20.00	238.02	3344.12	-489.40	-783.88	0.00	0.00	924.11	
4496.79	0.00	0.00	4323.94	-580.90	-930.43	2.00	180.00	1096.88	
8998.85	0.00	0.00	8826.00	-580.90	-930.43	0.00	0.00	1096.88	PBHL_NBU 1022-9B4BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1102.00	1112.86	GREEN RIVER
1441.00	1471.53	BIRDSNEST
1895.00	1954.67	MAHOGANY
4257.00	4429.85	WASATCH
6664.00	6836.85	MESAVERDE
8825.99	8998.84	SEGO

Plan: PLAN #1 PRELIMINRAY (NBU 1022-9B4BS/OH)

Created By: RobertScott Date: 12:01, January 06 2014

RECEIV

API Well Number: 43047545570000

Scientific Drilling

US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N
NBU 1022-9A PAD
NBU 1022-9B4BS

OH

Plan: PLAN #1 PRELIMINRAY

Standard Planning Report

06 January, 2014

Anadarko Petroleum Corporation

RECEIVED: July 01, 2014

Scientific Drilling

Planning Report

Anadarko Petroleum Corporation

Database:	Denver Sales	**Local Co-ordinate Reference:**	Well NBU 1022-9B4BS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 5137 & KB 4 @ 5141.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 5137 & KB 4 @ 5141.00ft (ASSUMED)
Site:	NBU 1022-9A PAD	**North Reference:**	True
Well:	NBU 1022-9B4BS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINRAY		

Project UTAH - UTM (feet), NAD27, Zone 12N

Map System:	Universal Transverse Mercator (US Survey Feet)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 12N (114 W to 108 W)		

Site NBU 1022-9A PAD, SECTION 9 T10S R22E

Site Position:		**Northing:**	14,518,876.37 usft	**Latitude:**	39.9697680
From:	Lat/Long	**Easting:**	2,078,509.53 usft	**Longitude:**	-109.4364320
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	1.00 °

Well NBU 1022-9B4BS, 412 FNL 517 FEL

Well Position	**+N/-S**	-28.77 ft	**Northing:**	14,518,847.12 usft	**Latitude:**	39.9696890
	+E/-W	-27.74 ft	**Easting:**	2,078,482.29 usft	**Longitude:**	-109.4365310
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	0.00 ft	**Ground Level:**	5,137.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	1/3/2014	10.80	65.78	51,982

Design PLAN #1 PRELIMINRAY

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	238.02

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	20.00	238.02	1,279.82	-91.50	-146.55	2.00	2.00	0.00	238.02	
3,496.79	20.00	238.02	3,344.12	-489.40	-783.88	0.00	0.00	0.00	0.00	
4,496.79	0.00	0.00	4,323.94	-580.90	-930.43	2.00	-2.00	0.00	180.00	
8,998.85	0.00	0.00	8,826.00	-580.90	-930.43	0.00	0.00	0.00	0.00	PBHL_NBU 1022-9B4

Scientific Drilling

Planning Report

Anadarko Petroleum Corporation

Database:	Denver Sales	**Local Co-ordinate Reference:**	Well NBU 1022-9B4BS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 5137 & KB 4 @ 5141.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 5137 & KB 4 @ 5141.00ft (ASSUMED)
Site:	NBU 1022-9A PAD	**North Reference:**	True
Well:	NBU 1022-9B4BS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINRAY		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
400.00	2.00	238.02	399.98	-0.92	-1.48	1.75	2.00	2.00	0.00
500.00	4.00	238.02	499.84	-3.70	-5.92	6.98	2.00	2.00	0.00
600.00	6.00	238.02	599.45	-8.31	-13.31	15.69	2.00	2.00	0.00
700.00	8.00	238.02	698.70	-14.76	-23.65	27.88	2.00	2.00	0.00
800.00	10.00	238.02	797.47	-23.05	-36.92	43.52	2.00	2.00	0.00
900.00	12.00	238.02	895.62	-33.15	-53.10	62.60	2.00	2.00	0.00
1,000.00	14.00	238.02	993.06	-45.07	-72.18	85.10	2.00	2.00	0.00
1,100.00	16.00	238.02	1,089.64	-58.77	-94.14	110.98	2.00	2.00	0.00
1,112.86	16.26	238.02	1,102.00	-60.67	-97.17	114.55	2.00	2.00	0.00
GREEN RIVER									
1,200.00	18.00	238.02	1,185.27	-74.26	-118.94	140.21	2.00	2.00	0.00
1,300.00	20.00	238.02	1,279.82	-91.50	-146.55	172.77	2.00	2.00	0.00
Start 2196.79 hold at 1300.00 MD									
1,400.00	20.00	238.02	1,373.78	-109.61	-175.56	206.97	0.00	0.00	0.00
1,471.53	20.00	238.02	1,441.00	-122.57	-196.31	231.43	0.00	0.00	0.00
BIRDSNEST									
1,500.00	20.00	238.02	1,467.75	-127.72	-204.57	241.17	0.00	0.00	0.00
1,600.00	20.00	238.02	1,561.72	-145.84	-233.59	275.37	0.00	0.00	0.00
1,700.00	20.00	238.02	1,655.69	-163.95	-262.60	309.58	0.00	0.00	0.00
1,800.00	20.00	238.02	1,749.66	-182.06	-291.61	343.78	0.00	0.00	0.00
1,900.00	20.00	238.02	1,843.63	-200.18	-320.62	377.98	0.00	0.00	0.00
1,954.67	20.00	238.02	1,895.00	-210.08	-336.48	396.68	0.00	0.00	0.00
MAHOGANY									
2,000.00	20.00	238.02	1,937.60	-218.29	-349.63	412.18	0.00	0.00	0.00
2,100.00	20.00	238.02	2,031.57	-236.40	-378.65	446.38	0.00	0.00	0.00
2,200.00	20.00	238.02	2,125.54	-254.51	-407.66	480.59	0.00	0.00	0.00
2,300.00	20.00	238.02	2,219.51	-272.63	-436.67	514.79	0.00	0.00	0.00
2,400.00	20.00	238.02	2,313.48	-290.74	-465.68	548.99	0.00	0.00	0.00
2,433.55	20.00	238.02	2,345.00	-296.82	-475.41	560.46	0.00	0.00	0.00
8 5/8"									
2,500.00	20.00	238.02	2,407.45	-308.85	-494.69	583.19	0.00	0.00	0.00
2,600.00	20.00	238.02	2,501.42	-326.97	-523.71	617.39	0.00	0.00	0.00
2,700.00	20.00	238.02	2,595.39	-345.08	-552.72	651.60	0.00	0.00	0.00
2,800.00	20.00	238.02	2,689.35	-363.19	-581.73	685.80	0.00	0.00	0.00
2,900.00	20.00	238.02	2,783.32	-381.31	-610.74	720.00	0.00	0.00	0.00
3,000.00	20.00	238.02	2,877.29	-399.42	-639.75	754.20	0.00	0.00	0.00
3,100.00	20.00	238.02	2,971.26	-417.53	-668.77	788.40	0.00	0.00	0.00
3,200.00	20.00	238.02	3,065.23	-435.65	-697.78	822.61	0.00	0.00	0.00
3,300.00	20.00	238.02	3,159.20	-453.76	-726.79	856.81	0.00	0.00	0.00
3,400.00	20.00	238.02	3,253.17	-471.87	-755.80	891.01	0.00	0.00	0.00
3,496.79	20.00	238.02	3,344.12	-489.40	-783.88	924.11	0.00	0.00	0.00
Start Drop -2.00									
3,500.00	19.94	238.02	3,347.14	-489.98	-784.81	925.21	2.00	-2.00	0.00
3,600.00	17.94	238.02	3,441.72	-507.17	-812.34	957.66	2.00	-2.00	0.00
3,700.00	15.94	238.02	3,537.38	-522.60	-837.05	986.79	2.00	-2.00	0.00
3,800.00	13.94	238.02	3,634.00	-536.24	-858.91	1,012.56	2.00	-2.00	0.00
3,900.00	11.94	238.02	3,731.46	-548.10	-877.89	1,034.95	2.00	-2.00	0.00
4,000.00	9.94	238.02	3,829.63	-558.15	-893.99	1,053.92	2.00	-2.00	0.00

Scientific Drilling

Planning Report

Anadarko Petroleum Corporation

Database:	Denver Sales	**Local Co-ordinate Reference:**	Well NBU 1022-9B4BS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 5137 & KB 4 @ 5141.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 5137 & KB 4 @ 5141.00ft (ASSUMED)
Site:	NBU 1022-9A PAD	**North Reference:**	True
Well:	NBU 1022-9B4BS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINRAY		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,100.00	7.94	238.02	3,928.42	-566.37	-907.16	1,069.45	2.00	-2.00	0.00
4,200.00	5.94	238.02	4,027.68	-572.77	-917.40	1,081.52	2.00	-2.00	0.00
4,300.00	3.94	238.02	4,127.30	-577.32	-924.70	1,090.13	2.00	-2.00	0.00
4,400.00	1.94	238.02	4,227.17	-580.03	-929.05	1,095.25	2.00	-2.00	0.00
4,429.85	1.34	238.02	4,257.00	-580.49	-929.77	1,096.10	2.00	-2.00	0.00
WASATCH									
4,496.79	0.00	0.00	4,323.94	-580.90	-930.43	1,096.88	2.00	-2.00	0.00
Start 4502.06 hold at 4496.79 MD									
4,500.00	0.00	0.00	4,327.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
4,600.00	0.00	0.00	4,427.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
4,700.00	0.00	0.00	4,527.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
4,800.00	0.00	0.00	4,627.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
4,900.00	0.00	0.00	4,727.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
5,000.00	0.00	0.00	4,827.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
5,100.00	0.00	0.00	4,927.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
5,200.00	0.00	0.00	5,027.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
5,300.00	0.00	0.00	5,127.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
5,400.00	0.00	0.00	5,227.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
5,500.00	0.00	0.00	5,327.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
5,600.00	0.00	0.00	5,427.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
5,700.00	0.00	0.00	5,527.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
5,800.00	0.00	0.00	5,627.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
5,900.00	0.00	0.00	5,727.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
6,000.00	0.00	0.00	5,827.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
6,100.00	0.00	0.00	5,927.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
6,200.00	0.00	0.00	6,027.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
6,300.00	0.00	0.00	6,127.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
6,400.00	0.00	0.00	6,227.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
6,500.00	0.00	0.00	6,327.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
6,600.00	0.00	0.00	6,427.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
6,700.00	0.00	0.00	6,527.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
6,800.00	0.00	0.00	6,627.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
6,836.85	0.00	0.00	6,664.00	-580.90	-930.43	1,096.88	0.00	0.00	0.00
MESAVERDE									
6,900.00	0.00	0.00	6,727.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
7,000.00	0.00	0.00	6,827.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
7,100.00	0.00	0.00	6,927.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
7,200.00	0.00	0.00	7,027.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
7,300.00	0.00	0.00	7,127.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
7,400.00	0.00	0.00	7,227.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
7,500.00	0.00	0.00	7,327.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
7,600.00	0.00	0.00	7,427.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
7,700.00	0.00	0.00	7,527.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
7,800.00	0.00	0.00	7,627.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
7,900.00	0.00	0.00	7,727.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
8,000.00	0.00	0.00	7,827.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
8,100.00	0.00	0.00	7,927.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
8,200.00	0.00	0.00	8,027.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
8,300.00	0.00	0.00	8,127.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
8,400.00	0.00	0.00	8,227.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
8,500.00	0.00	0.00	8,327.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
8,600.00	0.00	0.00	8,427.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
8,700.00	0.00	0.00	8,527.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00

Scientific Drilling

Planning Report

Anadarko Petroleum Corporation

Database:	Denver Sales	**Local Co-ordinate Reference:**	Well NBU 1022-9B4BS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 5137 & KB 4 @ 5141.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 5137 & KB 4 @ 5141.00ft (ASSUMED)
Site:	NBU 1022-9A PAD	**North Reference:**	True
Well:	NBU 1022-9B4BS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINRAY		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,800.00	0.00	0.00	8,627.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
8,900.00	0.00	0.00	8,727.15	-580.90	-930.43	1,096.88	0.00	0.00	0.00
8,998.84	0.00	0.00	8,825.99	-580.90	-930.43	1,096.88	0.00	0.00	0.00
SEGO									
8,998.85	0.00	0.00	8,826.00	-580.90	-930.43	1,096.88	0.00	0.00	0.00
TD at 8998.85 - PBHL_NBU 1022-9B4BS									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 1022-9B4BS - plan hits target center - Circle (radius 25.00)	0.00	0.00	8,826.00	-580.90	-930.43	14,518,250.00	2,077,562.19	39.9680940	-109.4398510

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,433.55	2,345.00	8 5/8"	8.625	11.000

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,112.86	1,102.00	GREEN RIVER			
1,471.53	1,441.00	BIRDSNEST			
1,954.67	1,895.00	MAHOGANY			
4,429.85	4,257.00	WASATCH			
6,836.85	6,664.00	MESAVERDE			
8,998.84	8,825.99	SEGO		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
300.00	300.00	0.00	0.00	Start Build 2.00
1,300.00	1,279.82	-91.50	-146.55	Start 2196.79 hold at 1300.00 MD
3,496.79	3,344.12	-489.40	-783.88	Start Drop -2.00
4,496.79	4,323.94	-580.90	-930.43	Start 4502.06 hold at 4496.79 MD
8,998.85	8,826.00	-580.90	-930.43	TD at 8998.85

Kerr-McGee Oil & Gas Onshore. L.P.

NBU 1022-9A PAD

API #		NBU 1022-9A1BS		
	Surface:	383 FNL / 489 FEL	NENE	Lot
	BHL:	226 FNL / 503 FEL	NENE	Lot
API #		**NBU 1022-9A4BS**		
	Surface:	390 FNL / 496 FEL	NENE	Lot
	BHL:	912 FNL / 491 FEL	NENE	Lot
API #		**NBU 1022-9B4BS**		
	Surface:	412 FNL / 517 FEL	NENE	Lot
	BHL:	984 FNL / 1448 FEL	NWNE	Lot
API #		**NBU 1022-9H1BS**		
	Surface:	397 FNL / 503 FEL	NENE	Lot
	BHL:	1535 FNL / 492 FEL	SENE	Lot
API #		**NBU 1022-9H1CS**		
	Surface:	405 FNL / 510 FEL	NENE	Lot
	BHL:	1778 FNL / 640 FEL	SENE	Lot

This Surface Use Plan of Operations (SUPO) or 13-point plan provides site-specific information for the above-referenced wells.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

An on-site meeting was held on October 23, 2013. Present were:

- Tyler Cox and Jessi Brunson - BLM;
- Mitch Batty - Timberline Engineering & Land Surveying, Inc.; and
- Cara Mahler, Kenny Warren, Casey McKee, Chantill Recker, Doreen Green, and Howdy Brown - Kerr-McGee

A. Existing Roads:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Please refer to Topo B for existing roads.

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B. New or Reconstructed Access Roads:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

No new access road is proposed

C. Location of Existing Wells:

Please refer to Topo C for exiting wells.

D. Location of Existing and/or Proposed Facilities:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

This pad will expand the existing pad for the NBU 1022-09AT, which is a producing gas well and the NBU 291 well which is a plugged and abandoned well according to Utah Division of Oil, Gas and Mining (UDOGM) records on January 8, 2014. Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (Kerr-McGee).

GAS GATHERING

Please refer to Exhibit A and Topo D2- Pad and Pipeline Detail.

The total gas gathering pipeline distance from the meter to the tie in point is ±2250' and the individual segments are broken up as follows:

The following segments are "onlease", no ROW needed.

±360' (0.06 miles) – Section 9 T10S R22E (NW/4 NW/4) – On-lease UTU01196-D, BLM surface, New 10" buried gas gathering pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.

±1120' (0.2 miles) – Section 9 T10S R22E (NW/4 NW/4) – On-lease UTU01196-D, BLM surface, New 10" buried gas gathering pipeline from the edge of the pad traversing southerly to an existing 16' gas pipeline. Please refer to Topo D2 - Pad and Pipeline Detail and Exhibit A - Line No. 8.

±770' (0.15 miles) – Section 9 T10S R22E (NW/4 NW/4) – On-lease UTU01196-D, BLM surface, New 4" surface pipeline re-route on the southeastern side of the pad. Please refer to Topo D2 - Pad and Pipeline Detail and Exhibit A - Line No. 9.

LIQUID GATHERING

Please refer to Exhibit B and Topo D2- Pad and Pipeline Detail.

The total liquid gathering pipeline distance from the separator to the tie in point is ±1480' and the individual segments are broken up as follows:

The following segments are "onlease", no ROW needed.

±360' (0.07 miles) – Section 9 T10S R22E (NW/4 NW/4) – On-lease UTU00196-D, BLM surface, New 6" buried liquid gathering pipeline from the separator to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.

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±1120' (0.2 miles) – Section 9 T10S R22E (NW/4 NW/4) – On-lease UTU00196-D, BLM surface, New 6" buried liquid gathering pipeline from the edge of the pad traversing southerly to an existing 6" liquid pipeline. Please refer to Topo D2 - Pad and Pipeline Detail and Exhibit B - Line No. 8.

Pipeline Gathering Construction

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

The Anadarko Completions Transportation System (ACTS) information:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Please refer to Exhibit C for ACTS Lines

E. Location and Types of Water Supply:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Water will be hauled to location over the roads marked on Maps A and B.

F. Construction Materials:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

G. Methods for Handling Waste:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Materials Management

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

H. Ancillary Facilities:

No additional ancillary facilities are planned for this location.

I. Well Site Layout:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

J. Plans for Surface Reclamation:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

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Interim Reclamation

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Final Reclamation

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Measures Common to Interim and Final Reclamation

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Weed Control

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Monitoring

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

K. Surface/Mineral Ownership:

United States of America
Bureau of Land Management
170 South 500 East
Vernal, UT 84078
(435)781-4400

L. Other Information:

Cultural and Paleontological Resources

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Resource Reports:

A Class I literature survey was completed on August 7, 2013 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC 13-208.

A paleontological reconnaissance survey was completed on July 23, 2013 by SWCA Environmental Consultants. For additional details please refer to report UT13-14314-136.

Biological field survey was completed on July 27, 2013 by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-909.

Proposed Action Annual Emissions Tables:

Please refer to the Appendix in the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

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M. Lessee's or Operators' Representative & Certification:

Joel Malefyt
Regulatory Analyst I
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6828

Tommy Thompson
General Manager, Drilling
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Joel Malefyt

January 20, 2014
Date

Kerr-McGee Oil & Gas Onshore L.P., wholly owned subsidiary of Anadarko Petroleum Corporation, Standard Operating Practice Agreement for the Greater Natural Buttes Field

Drilling Program

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations, Onshore Oil and Gas Orders, and the approved plan of operation. As Operator, KMG is fully responsible for actions of subcontractors. A copy of these Standard Operating Practices will be furnished to the field representatives to insure compliance.

Bureau of Land Management Notification Requirements:

Location Constructions: At least 48 hours prior to construction of location and access roads including notification, if applicable, to other surface management agencies, such as Ute Tribe Energy and Mineral Department, State of Utah, or private surface owner(s).

Location Completion: Prior to moving on the drilling rig

Spud Notice: At least 24 hours prior to spudding the well.

Casing String and Cementing: At least 24 hours prior to running casing and cementing all casing.

Blow Out Preventer & Related Equipment Tests: At least 24 hours prior to initiating pressure tests.

First Production Notice: Within 5 days after a new well begins production; or, within 5 days of when production resumes after a well has been off production for more than 90 days.

Details of the on-site inspection, including date, time, weather conditions, and individuals present, will be submitted with the site-specific Application for Permit to Drill (APD).

1. Estimated Tops of Important Geologic Markers:

Formation and depths will be submitted with site-specific APDs.

2. Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

Formation and depths will be submitted with site-specific APDs.

3. Pressure Control Equipment:

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Pressure Control Equipment Schematic is attached as appendix F. Any variance will be included in the site-specific APDs.

4. Proposed Casing & Cementing Program:

Proposed casing and cementing will be submitted with site-specific APDs.

5. Drilling Fluids Program:

Proposed drilling fluids will be submitted with site-specific APDs.

6. Evaluation Program:

Evaluation program will be submitted with site-specific APDs.

7. Abnormal Conditions:

Any abnormal condition will be submitted with site specific APDs.

8. Anticipated Starting Dates:

Drilling is planned to commence within the administrative period of an approved application.

9. Variances:

KMG respectfully requests a variance to several requirements associated with air drilling outlined in OSO 2:

Variance for air drilling

Air rig is only used by KMG to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig and is used to drill and construct the majority of the wellbore.

KMG typically utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 3,200 MD. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig

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also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill an 11inch hole to just above the Bird's Nest Interval. with an air hammer. The hammer is then tripped and replaced with an 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

OSO 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump, which is located near the reserve pit, will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement)

OSO 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and

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boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, OSO 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Variance for FIT Requirements

KMG also respectfully requests a variance to OSO 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). These wells are not exploratory wells and are being drilled in an area where the formation integrity is well known.

10. Other Information:

Drilling Program will be submitted with site-specific APDs.

SURFACE USE PROGRAM

A. Existing Roads:

Existing roads consist of county and improved/unimproved access roads (two-tracks). In accordance with OSO 1, KMG will improve or maintain existing roads in a condition that is the same as or better than before operations began. New or reconstructed proposed access roads are discussed in Section B.

The existing roads will be maintained in a safe and usable condition. Maintenance for existing roads will continue until final abandonment and reclamation of well pads and/or other facilities, as applicable. Road maintenance will include, but is not limited to, blading, ditching, and/or culvert installation and cleanout. To ensure safe operating conditions, gravel surfacing may be performed where excessive rutting or erosion may occur. Dust control may be performed as necessary to ensure safe operating conditions.

Roads, gathering lines and electrical distribution lines may occupy common disturbance corridors where possible. Where available, roadways may be used as the staging area and working space for installation of gathering lines. All disturbances located in the same corridor may overlap each other to the maximum extent possible, while maintaining safe and sound construction and installation practices. Unless otherwise approved or requested in site specific documents, in no case will the maximum disturbance widths of the access road and utility corridors exceed the widths specified in Part D of this document.

Within individual APDs, please refer to Topo B, for existing roads.

B. New or Reconstructed Access Roads:

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All new or reconstructed roads will be located, designed, and maintained to meet the standards of the BLM's Surface Operating Standards for Oil and Gas Exploration and Development, 4th Edition (Gold Book) (USDI and USDA, 2007). The BLM Manual Section 9113 (1985) will be considered in consultation with the BLM in the design, construction, improvement and maintenance of all new or reconstructed roads. If a new road would cross a water of the United States, KMG will adhere to all applicable US Army Corps of Engineers requirements in cooperation with the Utah Division of Water Rights.

New well pads or pad expansions may require construction of a new access road and/or de-commissioning of an older road. Plans, routes, and distances for new roads and road improvements are provided in design packages, exhibits and maps for a project. Project-specific maps are submitted to depict the locations of existing, proposed, and/or decommissioned and include the locations for supporting structures, including, but not limited to, culverts, bridges, low water crossings, range infrastructure, and haul routes, per OSO 1. Designs for cuts and fills, including spoils source and storage areas, are provided with the road designs, as necessary.

Where safety objectives can be met KMG may use unimproved and/or two-track roads for lease operations and to lessen total disturbance. Road designs will be based on the road safety requirements, traffic characteristics, environmental conditions, and the vehicles the road is intended to carry. Generally, newly constructed unpaved lease roads will be crowned and ditched with the running surfaces of the roads approximately 12-18 feet wide and a total road corridor width not to exceed 45 feet, except where noted in the road design for a specific project. Maximum grade will generally not exceed 8%. Borrow ditches will be back sloped 3:1 or less. Construction BMPs will be employed to control onsite and offsite erosion.

Where topography would direct storm water runoff to an access road or well pad, drainage ditches or other common drainage control facilities may be constructed to divert surface water runoff. Drainage features, including culverts, may be constructed or installed prior to commencing other operations, including drilling for facilities placement. Riprap will be placed at the inlet and outlet at the culvert(s). Drainage features will meet the standards of the BLM's Surface Operating Standards for Oil and Gas Exploration and Development, 4th Edition (Gold Book) (USDI and USDA, 2007).

Prior to construction, new access road(s) will be staked according to the requirements of OSO 1. Construction activities will not be conducted using frozen or saturated materials or during periods when significant watershed damage (e.g. rutting, extensive sheet soil erosion, formation of rills/gullies, etc.) is likely to occur. Vegetative debris will not be placed in or under fill embankments.

New road maintenance will include, but is not limited to, blading, ditching, culvert installation and cleanout, gravel surfacing where excessive rutting or erosion may occur and dust control, as necessary to ensure safe operating conditions. All vehicular traffic, personnel movement and construction/restoration operations will be confined to the approved area and to existing roadways and/or access routes.

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Snow removal will be conducted on an as-needed basis to accommodate safe travel. Snow removal will occur as necessary throughout the year, as will necessary drainage ditch construction. Removed snow may be stored on permitted well pads to reduce hauling distances and/or at the aerial extent of approved disturbance boundaries to facilitate snow removal for the remainder of the season.

If a county road crossing or encroachment permit is needed, it will be obtained prior to construction.

For individual APDs, refer to Topo B.

C. Location of Existing Wells:

For individual APDs, refer to Topo C

D. Location of Existing and/or Proposed Facilities:

The following will apply if the well is productive: Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (KMG). Should the well(s) prove productive, production facilities will be installed on the disturbed portion of each well pad.

A berm may be constructed completely around production components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will be constructed to hold the capacity of the largest tank and have sufficient freeboard to accommodate a 25 year rainfall event. This includes pumping units. Aboveground structures constructed or installed onsite for 6 months or longer, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with the BLM (typically Shadow Gray). A production facility layout is provided as part of a project- specific APD, ROW or NOS submission.

Gas Gathering

The gas gathering pipeline is made of steel line pipe, surface is bare pipe and buried is of coated with fusion bonded epoxy coating (or equivalent). The individual segments will be denoted in site-specific APDs.

Liquid Gathering

The individual segments will be denoted in site-specific APDs.

Pipeline Gathering Construction

Gas gathering pipeline(s,) gas lift, or liquids pipelines may be constructed to lie on the surface or be buried. The road and/or well pad may be utilized for construction activities and staging when the pipeline is adjacent to the road or well pad. The area of disturbance during construction from

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the edge of road or well pad and for surface and buried pipelines including cross country will typically be 45' temporary disturbance. In addition, KMG requests a permanent 30'disturbance width that will be maintained for the portion adjacent to the road as well as cross country lines. The need for the 30' of permanent disturbance width is for maintenance and repairs.

Above-ground installation will generally not require clearing of vegetation or blading of the surface, except where safety considerations necessitate earthwork. If installation cannot occur on the exact location, pipe may be constructed parallel and adjacent to a road and lifted from the road to the pipeline route. In other cases where a pipeline route is not parallel and adjacent to a road (cross-country between sites), it will be welded/fused in place at a well pad, access road, or designated work area and pulled between connection locations with a suitable piece of equipment. Buried pipelines will generally be installed parallel and adjacent to existing and/or newly constructed roads and within the permitted disturbance corridor. Buried pipelines may vary from 2" (typically fuel gas lines) to 24" (typically transportation lines) in diameter, but 6" to 16 "is typical for a buried gas line. The diameter of liquids pipelines may vary from 2" to 12", but 6"is the typical diameter. Gas lift lines may vary from 2" to 12" diameter, but 6" diameter pipes are generally used for gas lift. If two or more pipelines are present (gas gathering, gas lift, and fluids), they will share a common trench where possible.

When installing a buried pipeline, typically topsoil will be removed, windrowed and placed on the non-working side of the route for later reclamation. Because working room is limited, the spoil may be spread out across the working side and construction will take place on the spoil. The working side of the corridor will be used for pipe stringing, bending, welding and equipment travel. Small areas on the working side displaying ruts or uneven ground will be groomed to facilitate the safe passage of equipment. After the pipelines are installed, spoil will be placed back into the trench, and the topsoil will be redistributed over the disturbed corridor prior to final reclamation. Typical depth of the trench will be 6', but depths may vary according to site-specific conditions (presence of bedrock, etc.). The proposed trench width for the pipeline would range from 18"-48".

The pipeline will be welded along the proposed route and lowered into place. Trenching equipment will cut through the soil or into the bedrock and create good backfill, eliminating the need to remove large rocks. The proposed buried pipeline will be visually and radio-graphically inspected and the entire pipeline will be pneumatically or hydrostatically tested before being placed into service. Routine vehicle traffic will be prevented from using pipeline routes as travel ways by posting signs at the route's intersection with an access road.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

If pipelines or roads encounter a drainage that could be subject to flooding or surface water during extreme precipitation events, KMG will apply all applicable Army Corps mandates as

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well as the BLM's Hydraulic Considerations for pipeline Crossings of Stream Channels (BLM Technical Note 423, April 2007). In addition, all stream and drainage crossings will be evaluated to determine the need for stream alteration permits from the State of Utah Division of Water Rights and if necessary, required permits will be secured. Similarly, where a road or pipeline crossing exists the pipe will be butt welded and buried to a depth between 24 and 48 inches or more. Dirt roads will be cut and restored to a condition equivalent to the existing condition. All Uintah County road encroachment and crossing permits, where applicable, will be obtained prior to crossing construction. In no case will pressure testing of pipelines result in discharge of liquids to the surface.

Pipeline signs will be installed along the route to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves and lateral T's will be installed at various locations for production integrity and safety purposes.

Upon completion of the proposed buried pipeline, the entire area of disturbance will be reclaimed to the standards proposed in the Green River District Reclamation Guidelines. Please refer to section J for more details regarding final reclamation.

When no longer deemed necessary by the operator, KMG or its successor will consult with the BLM, Vernal Field Office before terminating of the use of the pipeline(s).

The Anadarko Completions Transportation System (ACTS) information:

For individual APDs, refer to Exhibit C for the proposed placement of the ACTS temporary lines.

KMG will use either a closed loop drilling system that will require one pit and one storage area to be constructed on the drilling pad or a traditional drilling operation with one pit. The storage area will be used to contain only the de-watered drill cuttings and will be lined and reclaimed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion pit is lined and will be used for the wells drilled on the pad or used as part of our ACTS system which is discussed in more detail below. Using the closed loop drilling system will allow KMG to decrease the amount of disturbance/footprint on location compared to a single large drilling/completion pit.

If KMG does not use a closed loop system, it will construct a drilling reserve pit to contain drill cuttings and for use in completion operations. Depending on the location of the pit, its relation to future drilling locations, the reserve/completion pit may be utilized for the completion of the wells on that pad and/or be used as part of our ACTS system. KMG will use ACTS to optimize the completion processes for multiple pads across the project area which may include up to a section of development. ACTS will facilitate management of completion fluids by utilizing existing reserve pits, or newly constructed completion pits, as well as temporary, surface-laid aluminum liquids transfer lines between pad locations. The pit will be refurbished as follows when a traditional drill pit is used, including mix and pile up drill cuttings with dry dirt, bury the original liner in the pit, walk bottom of pit with cat. KMG will reline the pit with a 30 mil liner and double felt padding. The refurbished or newly constructed pit will be the same size or

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smaller as specified in the originally approved ROW/APD. The pit refurbish will be done in a normal procedure and there will be no modification to the pit. All four sides of the completions pit will be fenced in according to standard pit fencing procedures. Netting will be installed over all pits.

Any hydrocarbons collected will be treated and sold at approved sales facilities. A loading/ unloading rack with drip containment will also be installed where water trucks would unload and load to prevent damage caused from pulling hoses in and out of the pit.

ACTS will require temporarily laying multiple 6 inch aluminum water transfer lines on the surface between either existing or refurbished reserve pits. The temporary aluminum transfer lines will be utilized to transport completion fluid being injected and/or recovered during the completion process and will be laid adjacent to existing access roads or pipeline corridors. Upon conclusion of the completion operation, the liquids transfer lines will be flushed with fresh water and purged with compressed air. The contents of the transfer lines will be flushed into a water truck for delivery to another ACTS location or a reserve pit.

The volume of frac fluid transported through a water transfer line will vary, but volume is projected to be approximately 1.75 bbls per 50-foot joint. Although the maximum working pressure is 125 psig, the liquids transfer lines will be operated at a pressure of approximately 30 to 40 psig. KMG will keep the netted pit open for one year from first production of the first produced well on the pad. During this time the surrounding well location completion fluids may be recycled in this pit and utilized for other completion jobs in the area. After one year KMG will backfill the pit and reclaim. If the pit is not needed for an entire year it will be backfilled and reclaimed earlier. KMG understands that due to the temporary nature of this system, BLM considers this a casual use situation; therefore, no permanent ROW or temporary use plan will need to be issued by the BLM.

E. Location and Types of Water Supply:

Water for drilling and completion operations will be obtained from the following sources:
JD Field Services:

Green River:	1087’ FSL & 1020’ FEL, Sec. 15 – T2N – R22E

RN Industries:

High Pressure:	705’ FNL & 675’ FWL, Sec. 1 – T6S – R22E
	1057’ FNL & 390’ FWL, Sec. 1 – T6S – R22E
	1239’ FNL & 52’ FEL, Sec. 6 – T6S – R23E
White River:	501’ FNL & 1676’ FEL, Sec. 9 – T8S – R20E
	471’ FNL & 1676’ FEL, Sec. 9 – T8S – R20E
	900’ FNL & 550’ FEL, Sec. 35 – T9S – R22E
	200’ FNL & 950’ FEL, Sec. 2 – T10S – R22E
	275’ FSL & 2275’ FEL, Sec. 2 – T10S – R22E
	122’ FSL & 1350’ FEL, Sec. 11 – T10S – R22E
	1670’ FSL & 500’ FEL, Sec. 12 – T10S – R22E

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	959’ FNL & 705’ FEL, Sec. 13 – T10S – R22E
	600’ FSL & 900’ FEL, Sec. 13 – T10S – R22E
Water Plant:	481’ FNL & 2176’ FEL, Sec. 9 – T8S – R20E
	471’ FNL & 2176’ FEL, Sec. 9 – T8S – R20E
Frog Pond:	4820’ FNL & 1200’ FWL, Sec. 33 – T8S – R20E
	4850’ FNL & 700’ FWL, Sec. 33 – T8S – R20E
Blue Tanks:	200’ FNL & 405’ FEL, Sec. 32 – T4S – R3E

Buggsy’s Water Source:
Green River: N 2090’ & W 30’ from E1/4 corner of Sec. 33 – T8S – R20E

Underground Water Well: N 1850’ & W 425’ from E1/4 corner of Sec. 33 – T8S – R20E

Water will be hauled to location over the roads marked in the individual APD’s Maps A and B.

F. Construction Materials:

Construction operations will typically be completed with native materials found on location. Construction materials imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source (described in site-specific documents). No construction materials will be removed from Federal lands without notifying the BLM. A proposed source location other than an on-location construction site will be designated either via a map or narrative within the project specific materials provided to the BLM.

G. Methods for Handling Waste:

All wastes subject to regulation will be handled in compliance with applicable laws to minimize the potential for leaks or spills to the environment. KMG maintains a Spill Control and Countermeasure Plan for each applicable location, which includes notification requirements, to the BLM and other appropriate agencies, for all reportable spills of oil, produced liquids, and hazardous materials.

Any accidental release, such as a leak or spill in excess of the reportable quantity, as established by 40 CFR Part 117.3, will be reported as per the requirements of Comprehensive Environmental Response, Compensation, and Liability Act, Section 102 B. If a release involves petroleum hydrocarbons or produced liquids, KMG will comply with the notification requirements of NTL-3A.

Drill cuttings and/or drilling fluids may be contained in a reserve/completion pit whether a closed loop system is or isn’t utilized and cuttings may be buried in the pit(s) upon closure. Unless specifically approved by the BLM, no oil or other oil-based drilling additives,

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chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

If utilizing a closed loop system, drill cuttings and/or drilling fluids may be stored in above ground containers while on the location. All used drilling fluids may be hauled to Anadarko Petroleum Corporation's Mud Plant where it may be recycled for use at future well locations, hauled to a permitted disposal facility, or solidified for incorporation into the pad during interim reclamation practices. Drill cuttings from a closed loop system may be either hauled to an approved Utah Department of Oil, Gas and Mining Commercial Landfarm Disposal Facility or incorporated into the pad location during interim reclamation.

Pits will be constructed to eliminate the accumulation of surface precipitation runoff into the pit (via appropriate placement of subsoil storage areas and/or construction of berms, ditches, etc). Should unexpected liquid petroleum hydrocarbons (crude oil or condensate) be encountered during drilling, completions or well testing, liquid petroleum hydrocarbons will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Netting will be placed over pits before any liquids are discharged into pit. Should hydrocarbons be released into a reserve/completion pit, they will be removed as soon as practical and before the netting is removed from the pit. Similarly, hydrocarbon removal will take place prior to the closure of the pit, unless authorization is provided for disposal via alternate pit closure methods (e.g. solidification).

The reserve and/or completion pit will be lined with a synthetic material 30 mil or thicker liner. The bottom and side walls of the pit will be void of any sharp rocks that could puncture the liner. The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. After evaporation and when dry, the reserve pit liners will be cut off, ripped and/or folded back (as safety considerations allow) as near to the mud surface as possible and buried on location or hauled to a landfill prior to backfilling the pit with a minimum of five feet of soil material.

Where necessary and if conditions allow, produced liquids from newly completed wells may be temporarily disposed of into pits for a period not to exceed 90 days as per OSO 7. Subsequently, permanent approved produced water disposal methods will be employed in accordance with OSO 7 and/or as described in a Water Management Plan (WMP). Revisions to the water source or method of transportation will be subject to written approval from the BLM.

Any additional pits necessary for subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after one year from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and

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the pit reclaimed. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse (trash and other solid waste including cans, paper, cable, etc.) generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility. Immediately after removal of the drilling rig, all debris and other waste materials not contained within trash receptacles will be collected and removed from the well location.

For the protection of livestock and wildlife, all open pits (excluding flare pits) will be fenced or netted to prevent wildlife or livestock entry.

Maximum distance between fence posts shall be no greater than 16 feet. Siphons, catchments, and absorbent pads will be installed to keep hydrocarbons produced by the drilling rig or other equipment on location from entering the reserve pit. Hydrocarbons, contaminated pads, and/or soils will be disposed of in accordance with state and federal requirements.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

Materials Management

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term “hazardous materials” as used here means: (1) any substance, pollutant, or containment listed as hazardous under the CERCLA of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Hazardous materials may be contained in some grease or lubricants, solvents, acids, paint, and herbicides, among others as defined above. KMG maintains a file, per 29 CFR 1910.1200 (g) containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances that are used during the course of construction, drilling, completion, and production operations for this project. The transport, use, storage and handling of hazardous materials will follow procedures specified by federal and state regulations. Transportation of hazardous materials to the well location is regulated by the Department of Transportation (DOT) under 49 CFR, Parts 171-180. DOT regulations pertain to the packing, container handling, labeling, vehicle placarding, and other safety aspects.

Potentially hazardous materials used in the development or operation of wells will be kept in limited quantities on well sites and at the production facilities for short periods of time.

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Chemicals meeting the criteria for being an acutely hazardous material/substance or meet the quantities criteria per BLM Instruction Memorandum No. 93-344 will not be used. Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities (crude oil/condensate, produced water). They may also be kept in limited quantities on drilling sites (barite, diesel fuel, cement, cottonseed hulls etc.) for short periods of time during drilling or completion activities.

Any produced water separated from recoverable condensate during well operations will be contained in a water tank and will then be transported by pipeline and/or truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E
NBU #159 in Sec. 35 T9S R21E
Ace Oilfield in Sec. 2 T6S R20E
MC&MC in Sec. 12 T6S R19E
Pipeline Facility in Sec. 36 T9S R20E
Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E
Bonanza Evaporation Pond in Sec. 2 T10S R23E

Or to one of the following KMG active Salt Water Disposal (SWD) wells:

NBU 159 SWD in Sec. 35 T9S R21E
CIGE 112D SWD in Sec. 19 T9S R21E
CIGE 114 SWD in Sec. 34 T9S R21E
NBU 921-34K SWD in Sec. 34 T9S R21E
NBU 921-33F SWD in Sec. 34 T9S R21E

H. Ancillary Facilities:

If additional ancillary facilities are planned they will be depicted on site specific APDs.

I. Well Site Layout:

The location, orientation and aerial extent of each drill pad, reserve/completion/flare pit (for closed loop or non-closed loop operations), access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure, proposed cuts and fills, and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable.

Site-specific conditions may require slight deviation in actual equipment depending on whether a closed loop system is used. Surface distance may be less if using closed loop. But in either case, the area of disturbance will not exceed the maximum disturbance outlined in the attached exhibits of the APDs.

Each well will utilize either a centralized tank battery, centralized fluids management system, or have tanks installed on its pad. Production/Produced Liquid tanks will be constructed,

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maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks will be kept reasonably free from surface accumulations of liquid hydrocarbons. The tanks are not to be used for disposal of liquids from additional sources without prior approval of BLM.

J. Plans for Surface Reclamation:

The surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. Interim reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but is not limited to the re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils material, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

Interim Reclamation
Interim reclamation may include pit evaporation, fluid removal, pit solidification, re-contouring, incorporation of cuttings, ripping, spreading top soil, seeding, and/or weed control. Interim reclamation will be performed in accordance with OSO 1, or written notification will be provided to the BLM for approval. Where feasible, drilling locations, reserve pits, or access routes not utilized for production operations will be re-contoured to a natural appearance.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. Stockpiled drill cuttings may also be incorporated into the spoils, recontoured, and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left “rough” after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit. Disposal of pit fluids and linings is discussed in Section G.

Final Reclamation

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Final reclamation will be performed for unproductive wells and after the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by KMG. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. The BLM will be notified prior to commencement of reclamation operations. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as close as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring the site and prior to replacing topsoil, final grading and site preparation will be conducted over the entire surface of the well site and access road. The area will be ripped to a depth no greater than 6 inches on 18 to 24-inch centers and the surface soil material will be uniformly pitted with longitudinal depressions perpendicular to the natural flow of water where practical. Following site preparation, topsoil will be spread on the location and prepared for seeding.

Reclamation of roads will be performed at the discretion of the BLM. All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 6 to 24 inches where practical, re-contoured to approximate the original contour of the ground and seeded in accordance with the seeding specifications of the BLM.

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to the BLM.

Measures Common to Interim and Final Reclamation

Soil tillage will be conducted using a disk in areas needing additional seedbed preparation following site preparation. This will provide primary soil tillage to a depth no greater than 6 inches. Prior to reseeding, compacted areas will be scarified by ripping or chiseling to loosen compacted soils, promote water infiltration, and improve soil aeration and root penetration.

Seeding will occur during optimal soil conditions and will typically be accomplished through the use of a no-till rangeland style seed drill with a “picker box.” Additionally an imprinter seeder may be used. An imprinter seeder creates divots to roughen the surface and collect moisture to aid in seed germination. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for re-vegetation. The seed mixes will be selected from a list provided by or approved by the BLM, or a specific seed mix will be proposed by KMG to the BLM and used after its approval. The selected specific seed mix for each well location and road segment will be utilized while performing interim and final reclamation for each project. All seed will be certified and tags will be

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maintained by KMG. Every effort will be made to obtain “cheat grass free seed” and noxious weed free seed.

Seed Mix to be used for Well Site, Access Road, and Pipeline (as applicable):

Bonanza Area Mix	**Pure Live Seed lbs/acre**
Crested Wheat (Hycrest)	1.5
Bottlebrush Squirreltail	1
Western Wheatgrass (Arriba)	1
Thick Spike Wheatgrass	1.5
Indian Ricegrass	1
Fourwing Saltbush	2
Shadscale	2
Forage Kochia	0.25
Rocky Mountain Bee Plant	0.5
Total	10.75

Natural Buttes Area Mix Option 1:	**Pure Live Seed lbs/acre**
Indian Ricegrass (Nezpar)	3
Thick Spike Wheatgrass	2
Sandberg bluegrass	0.5
Bottlebrush squirreltail	1
Crested wheatgrass (Hycrest)	1
Winterfat	0.25
Shadscale	1.5
Four-wing saltbush	0.75
Forage Kochia	0.25
Total	10.25

Natural Buttes Area Mix Option 2:	**Pure Live Seed lbs/acre**

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Galleta Grass	0.5
Great Basin Wildrye	0.5
Thickspike Wheatgrass	2.5
Indian Ricegrass (Nezpar)	1
Crested Wheatgrass	1
Siberian Wheatgrass	1
Bottlebrush Squirreltail	1
Munro Globemallow	0.1
Palmer Penstemon	0.1
Rocky Mtn beeplant	0.5
Western yarrow	0.1
Shadscale	0.5
Forage Kochia	0.5
Total	9.3

Natural Buttes Area Mix Option 3:	**Pure Live Seed lbs/acre**
Galleta Grass	2
Sandberg bluegrass	0.5
Shadscale	0.5
Bluebunch (secar)	2
Indian Ricegrass (Nezpar)	2
Western Wheatgrass (Arriba)	2
Palmer penstemon	0.25
Munro Globemallow	0.15
Black Sage	0.25
Winterfat	0.25
Forage Kochia	0.25
Total	10.15

Additional soil amendments and/or stabilization may be required on sites with poor soils and/or excessive erosion potential. Where severe erosion can become a problem and/or the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. Slopes will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to: erosion control blankets, hydro-mulch, and/or bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage. Soil amendments such as “Sustain” (an organic fertilizer that will be applied at the rate 1,800 – 2,100 lbs/acre with seed) may also be dry broadcast or applied with hydro-seeding equipment.

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Weed Control

All weed management will be done in accordance with the Vernal BLM Surface Disturbance Weed Policy. Noxious weeds will be controlled, as applicable, on project areas. Monitoring and management of noxious and/or invasive weeds of concern will be completed annually until the project is deemed successfully reclaimed by the surface management agency and/or owner according to the Anadarko Integrated Weed Management Plan. Noxious weed infestations will be mapped using a GPS unit and submitted to the BLM with information required in the Vernal BLM Surface Disturbance Weed Policy. If herbicide is to be applied it will be done according to an approved Pesticide Use Proposal (PUP), inclusive of applicable locations. All pesticide applications will be recorded using a Pesticide Application Record (PAR) and will be submitted along with a Pesticide Use Report (PUR) annually prior to Dec. 31.

Monitoring

Monitoring of reclaimed project areas will be completed annually during the growing season and actions to ensure reclamation success will be taken as needed. During the first two growing seasons an ocular methodology will be used to determine the success of the reclamation activities. During the 3rd growing season a 100 point line intercept (quantitative) methodology will be used to obtain basal cover. The goal is to have the reclaimed area reach 30% basal cover when compared to the reference site. If after three growing seasons the area has not reached 30% basal cover, additional reclamation activities may be necessary. Monitoring will continue until the reclaimed area reaches 75% basal cover of desirable vegetation when compared to the reference site. (Green River District Reclamation Guidelines).

All monitoring reports will be submitted electronically to the Vernal BLM in the form of a geo-database no later than March 1st of the calendar year following the data collection.

K. Surface/Mineral Ownership:

Depicted on site specific APDs.

L. Other Information:

Cultural and Paleontological Resources

All personnel are strictly prohibited from collecting artifacts, any paleontological specimens or fossils, and from disturbing any significant cultural resources in the area. If artifacts, fossils, or any culturally sensitive materials are exposed or identified in the area of construction, all construction operations that would affect the newly discovered resource will cease, and KMG will provide immediate notification to the BLM or appropriate SMA.

Resource Reports

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Appropriate archaeological and paleontological reconnaissance surveys and biological field surveys will be completed and provide to the BLM for individual APDs.

Proposed Action Annual Emissions Tables:

Appendix A through G contains the emission table per pad based on well count.

M. Lessee's or Operators' Representative & Certification:

Depicted on site specific APDs.

Appendix A:

Proposed Action Annual Emissions Tables: 4 Well Pad

Table 1: Proposed Action Annual Emissions (tons/year)[1]

Pollutant	Development	Production	Total
NOx	3.8	1.2	5
CO	2.2	1.08	3.28
VOC	0.1	6.8	6.9
SO_2	0.005	0.01	0.02
PM_{10}	1.7	0.11	1.81
$PM_{2.5}$	0.4	0.05	0.45
Benzene	2.20E-03	0.12	0.12
Toluene	1.60E-03	0.2	0.2
Ethylbenzene	3.40E-04	0.01	0.01
Xylene	1.10E-03	0.09	0.09
n-Hexane	1.70E-04	0.51	0.51
Formaldehyde	1.30E-02	1.30E-04	1.31E-02

[1] Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison

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Species	Proposed Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory[a] (ton/yr)	Percentage of Proposed Action to WRAP Phase III
NOx	5	16,547	0.03%
VOC	6.9	127,495	0.01%

[a] http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html

Uintah Basin Data

Appendix B:

Proposed Action Annual Emissions Tables: 5 Well Pad

Table 1: Proposed Action Annual Emissions (tons/year)[1]

Pollutant	Development	Production	Total
NOx	3.8	1.5	5.3
CO	2.2	1.08	3.28
VOC	0.1	8.5	8.6
SO_2	0.005	0.01	0.02
PM_{10}	1.7	0.11	1.81
$PM_{2.5}$	0.4	0.05	0.45
Benzene	2.20E-03	0.12	0.12
Toluene	1.60E-03	0.2	0.2
Ethylbenzene	3.40E-04	0.01	0.01
Xylene	1.10E-03	0.09	0.09
n-Hexane	1.70E-04	0.51	0.51
Formaldehyde	1.30E-02	1.30E-04	1.31E-02

[1] Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison

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Species	Proposed Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory[a] (ton/yr)	Percentage of Proposed Action to WRAP Phase III
NOx	5.3	16,547	0.03%
VOC	8.6	127,495	0.01%

[a] http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html Uintah Basin Data

Appendix C:

Proposed Action Annual Emissions Tables: 6 Well Pad

Table 1: Proposed Action Annual Emissions (tons/year)[1]

Pollutant	Development	Production	Total
NOx	3.8	1.8	5.6
CO	2.2	1.08	3.28
VOC	0.1	10.2	10.3
SO_2	0.005	0.01	0.02
PM_{10}	1.7	0.11	1.81
$PM_{2.5}$	0.4	0.05	0.45
Benzene	2.20E-03	0.12	0.12
Toluene	1.60E-03	0.2	0.2
Ethylbenzene	3.40E-04	0.01	0.01
Xylene	1.10E-03	0.09	0.09
n-Hexane	1.70E-04	0.51	0.51
Formaldehyde	1.30E-02	1.30E-04	1.31E-02

[1] Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison

Species	Proposed Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory[a] (ton/yr)	Percentage of Proposed Action to WRAP Phase III
NOx	5.6	16,547	0.03%
VOC	10.3	127,495	0.01%

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[a] http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html Uintah Basin Data

Appendix D:

Proposed Action Annual Emissions Tables: 7 Well Pad

Table 1: Proposed Action Annual Emissions (tons/year)[1]

Pollutant	Development	Production	Total
NOx	3.8	2.1	5.9
CO	2.2	1.08	3.28
VOC	0.1	11.9	12
SO_2	0.005	0.01	0.02
PM_{10}	1.7	0.11	1.81
$PM_{2.5}$	0.4	0.05	0.45
Benzene	2.20E-03	0.12	0.12
Toluene	1.60E-03	0.2	0.2
Ethylbenzene	3.40E-04	0.01	0.01
Xylene	1.10E-03	0.09	0.09
n-Hexane	1.70E-04	0.51	0.51
Formaldehyde	1.30E-02	1.30E-04	1.31E-02

[1] Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison

Species	Proposed Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory[a] (ton/yr)	Percentage of Proposed Action to WRAP Phase III
NOx	5.9	16,547	0.03%
VOC	12	127,495	0.01%

[a] http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html Uintah Basin Data

Appendix E:

Proposed Action Annual Emissions Tables: 8 Well Pad

Table 1: Proposed Action Annual Emissions (tons/year)[1]

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Pollutant	Development	Production	Total
NOx	3.8	2.4	6.2
CO	2.2	1.08	3.28
VOC	0.1	13.6	13.7
SO_2	0.005	0.01	0.02
PM_{10}	1.7	0.11	1.81
$PM_{2.5}$	0.4	0.05	0.45
Benzene	2.20E-03	0.12	0.12
Toluene	1.60E-03	0.2	0.2
Ethylbenzene	3.40E-04	0.01	0.01
Xylene	1.10E-03	0.09	0.09
n-Hexane	1.70E-04	0.51	0.51
Formaldehyde	1.30E-02	1.30E-04	1.31E-02

[1] Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison

Species	Proposed Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory[a] (ton/yr)	Percentage of Proposed Action to WRAP Phase III
NOx	6.2	16,547	0.03%
VOC	13.7	127,495	0.01%

[a] http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html Uintah Basin Data

Appendix F:

Proposed Action Annual Emissions Tables: 10 Well Pad

Table 1: Proposed Action Annual Emissions (tons/year)[1]

Pollutant	Development	Production	Total
NOx	3.8	3	6.8
CO	2.2	1.08	3.28
VOC	0.1	17	17.1
SO_2	0.005	0.01	0.02

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PM_{10}	1.7	0.11	1.81
$PM_{2.5}$	0.4	0.05	0.45
Benzene	2.20E-03	0.12	0.12
Toluene	1.60E-03	0.2	0.2
Ethylbenzene	3.40E-04	0.01	0.01
Xylene	1.10E-03	0.09	0.09
n-Hexane	1.70E-04	0.51	0.51
Formaldehyde	1.30E-02	1.30E-04	1.31E-02

[1] Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison

Species	Proposed Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory[a] (ton/yr)	Percentage of Proposed Action to WRAP Phase III
NOx	6.8	16,547	0.03%
VOC	17.1	127,495	0.01%

[a] http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html Uintah Basin Data

Appendix G:

Proposed Action Annual Emissions Tables: 12 Well Pad

Table 1: Proposed Action Annual Emissions (tons/year)[1]

Pollutant	Development	Production	Total
NOx	3.8	3.6	7.4
CO	2.2	1.08	3.28
VOC	0.1	20.4	20.5
SO_2	0.005	0.01	0.02
PM_{10}	1.7	0.11	1.81
$PM_{2.5}$	0.4	0.05	0.45

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Benzene	2.20E-03	0.12	0.12
Toluene	1.60E-03	0.2	0.2
Ethylbenzene	3.40E-04	0.01	0.01
Xylene	1.10E-03	0.09	0.09
n-Hexane	1.70E-04	0.51	0.51
Formaldehyde	1.30E-02	1.30E-04	1.31E-02

[1] Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison

Species	Proposed Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory[a] (ton/yr)	Percentage of Proposed Action to WRAP Phase III
NOx	7.4	16,547	0.03%
VOC	20.5	127,495	0.01%

[a] http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html Uintah Basin Data

Appendix G:

Proposed Action Annual Emissions Tables: 15 Well Pad

Table 1: Proposed Action Annual Emissions (tons/year)[1]

Pollutant	Development	Production	Total
NOx	3.8	4.5	8.3
CO	2.2	1.08	3.28
VOC	0.1	25.5	25.6
SO_2	0.005	0.01	0.02
PM_{10}	1.7	0.11	1.81
$PM_{2.5}$	0.4	0.05	0.45
Benzene	2.20E-03	0.12	0.12
Toluene	1.60E-03	0.2	0.2
Ethylbenzene	3.40E-04	0.01	0.01
Xylene	1.10E-03	0.09	0.09
n-Hexane	1.70E-04	0.51	0.51
Formaldehyde	1.30E-02	1.30E-04	1.31E-02

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[1] Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

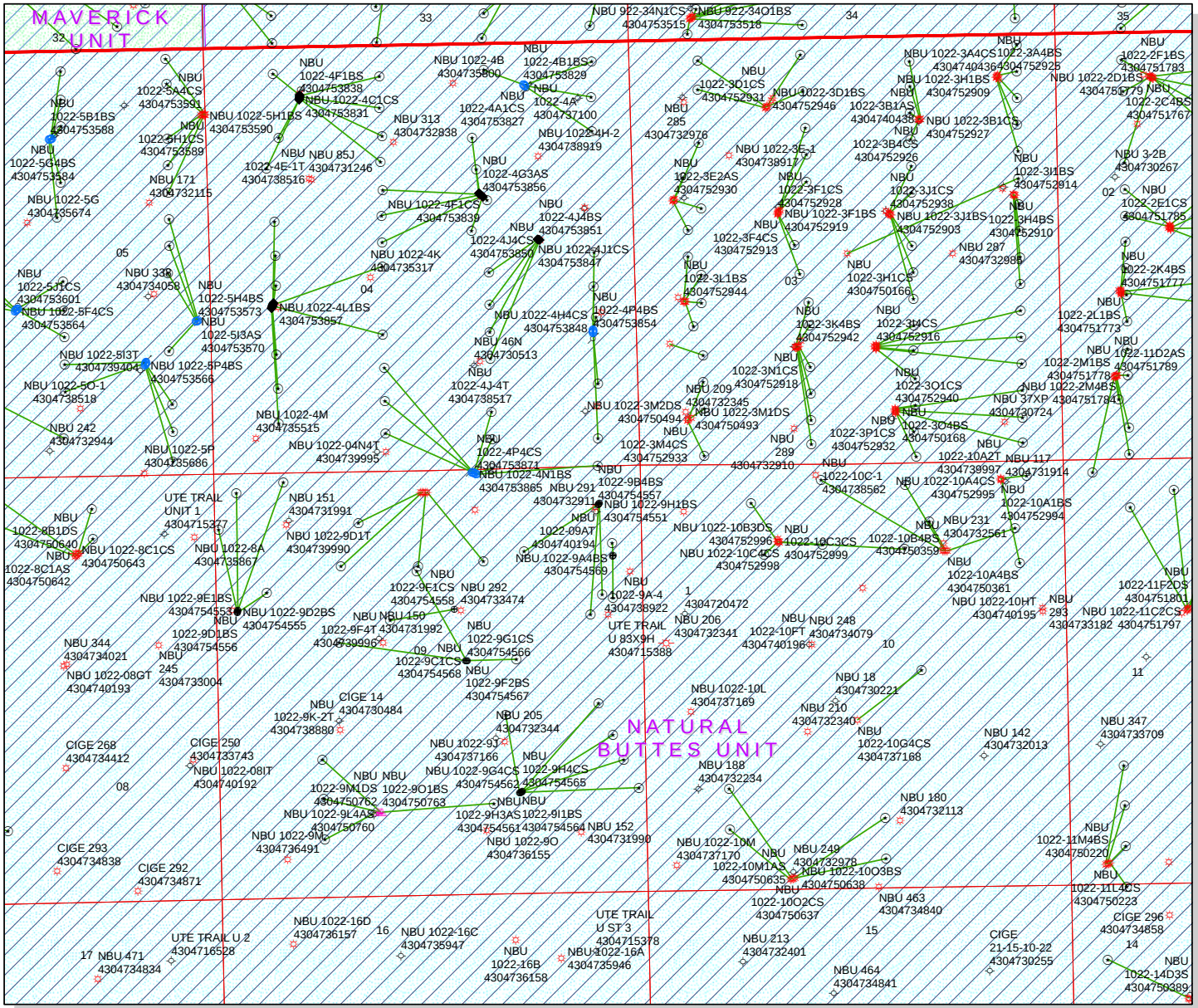
Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison

Species	Proposed Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory[a] (ton/yr)	Percentage of Proposed Action to WRAP Phase III
NOx	8.3	16,547	0.03%
VOC	25.6	127,495	0.01%

[a] http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html Uintah Basin Data

RECEIVED: July 01, 2014

API Well Number: 43047545570000



API Number: 4304754557

Well Name: NBU 1022-9B4BS

Township: T10.0S Range: R22.0E Section: 09 Meridian: S

Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared: 7/9/2014
Map Produced by Diana Mason

Wells Query

Status

- APD - Aproved Permit
- DRL - Spuded (Drilling Commenced)
- GIW - Gas Injection
- GS - Gas Storage
- LOC - New Location
- OPS - Operation Suspended
- PA - Plugged Abandoned
- PGW - Producing Gas Well
- POW - Producing Oil Well
- SGW - Shut-in Gas Well
- SOW - Shut-in Oil Well
- TA - Temp. Abandoned
- TW - Test Well
- WDW - Water Disposal
- WIW - Water Injection Well
- WSW - Water Supply Well

Units

STATUS

- ACTIVE
- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

Fields

STATUS

- Unknown
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- STORAGE
- TERMINATED

1,500 750 0 1,500 Feet

1:15,368

RECEIVED: July 09, 2014

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
440 West 200 South, Suite 500
Salt Lake City, UT 84101

IN REPLY REFER TO:
3160
(UT-922)

July 7, 2014

Memorandum

To: Assistant Field Office Manager Minerals,
Vernal Field Office

From: Michael Coulthard, Petroleum Engineer

Subject: 2014 Plan of Development Natural Buttes Unit
Uintah County, Utah.

Pursuant to email between Diana Mason, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2014 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
NBU 1022-9A PAD		
43-047-54546	NBU 1022-9A1BS	Sec 09 T10S R22E 0383 FNL 0489 FEL BHL Sec 09 T10S R22E 0226 FNL 0503 FEL
43-047-54551	NBU 1022-9H1BS	Sec 09 T10S R22E 0397 FNL 0503 FEL BHL Sec 09 T10S R22E 1535 FNL 0492 FEL
43-047-54552	NBU 1022-9H1CS	Sec 09 T10S R22E 0405 FNL 0510 FEL BHL Sec 09 T10S R22E 1778 FNL 0640 FEL
43-047-54557	NBU 1022-9B4BS	Sec 09 T10S R22E 0412 FNL 0517 FEL BHL Sec 09 T10S R22E 0984 FNL 1448 FEL
NBU 1022-9E PAD		
43-047-54553	NBU 1022-9E1BS	Sec 09 T10S R22E 1683 FNL 0245 FWL BHL Sec 09 T10S R22E 1443 FNL 0621 FWL
43-047-54554	NBU 1022-9D2CS	Sec 09 T10S R22E 1673 FNL 0247 FWL BHL Sec 09 T10S R22E 0647 FNL 0044 FWL
43-047-54555	NBU 1022-9D2BS	Sec 09 T10S R22E 1653 FNL 0251 FWL BHL Sec 09 T10S R22E 0192 FNL 0277 FWL
43-047-54556	NBU 1022-9D1BS	Sec 09 T10S R22E 1663 FNL 0249 FWL BHL Sec 09 T10S R22E 0073 FNL 0864 FWL

RECEIVED: July 09, 2014

API #	WELL NAME	LOCATION

(Proposed PZ WASATCH-MESA VERDE)

NBU 1022-9G PAD

43-047-54558 NBU 1022-9F1CS Sec 09 T10S R22E 1690 FNL 2329 FEL
BHL Sec 09 T10S R22E 1811 FNL 2139 FWL

This office has no objection to permitting the wells at this time.

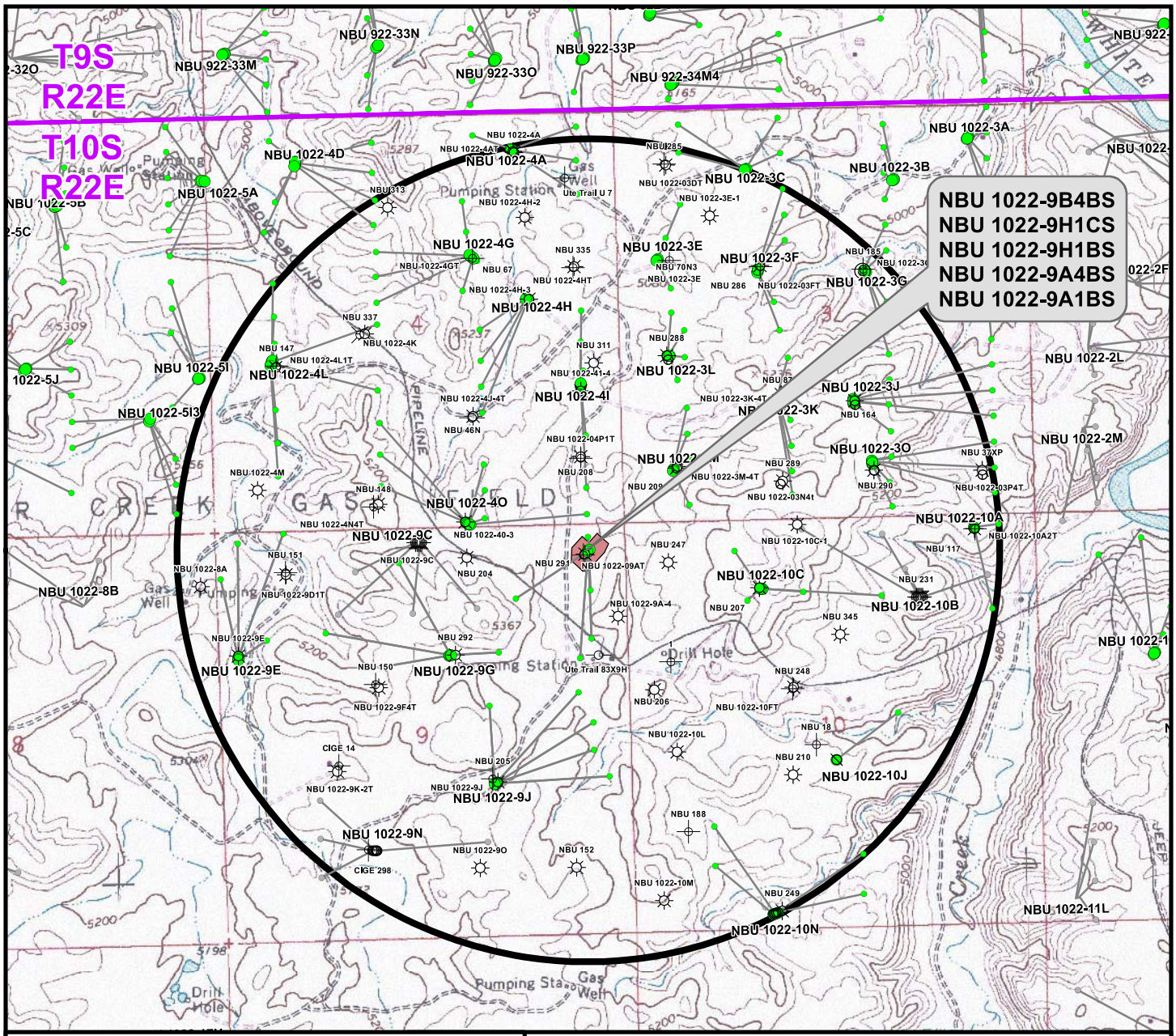
Michael Coulthard

Digitally signed by Michael Coulthard
DN: cn=Michael Coulthard, o=Bureau of Land Management, ou=Division of Minerals, email=mcoultha@blm.gov, c=US
Date: 2014.07.07 09:41:49 -06'00'

bcc: File - Natural Buttes Unit
Division of Oil Gas and Mining
Central Files
Agr. Sec. Chron
Fluid Chron

MCoulthard:mc:7-7-14

RECEIVED: July 09, 2014



Well locations derived from Utah Division of Oil, Gas and Mining (UDOGM) (oilgas.ogm.utah.gov). The estimated distances from proposed bore locations to the nearest existing bore locations are based on UDOGM data.

Proposed Well	Nearest Well Bore	Footage
NBU 1022-9B4BS	NBU 1022-9B4CS BH	±522ft
NBU 1022-9H1CS	Ute Trail 83X9H	±231ft
NBU 1022-9H1BS	Ute Trail 83X9H	±224ft
NBU 1022-9A4BS	NBU 291	±462ft
NBU 1022-9A1BS	NBU 1022-09AT	±227ft

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Well - 1 Mile Radius
- Producing
- Spudded
- APD Approved
- Preliminary Location
- Deferred
- Cancelled
- Temporarily Abandoned
- Active Injector
- Location Abandoned
- Plugged & Abandoned
- Shut-In

WELL PAD - NBU 1022-9A

TOPO C
NBU 1022-9B4BS,
NBU 1022-9H1CS, NBU 1022-9H1BS
NBU 1022-9A4BS & NBU 1022-9A1BS
LOCATED IN SECTION 9, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 13
DRAWN: TL	DATE: 18 Nov 2013	13 OF 17
REVISED:	DATE:	

K:\ANADARKO\2013\2013_55_NBU_1022-9_FOCUS\GIS\Maps_ABCDE\NBU 1022-9A\NBU 1022-9A_C.mxd 11/22/2013 10:59:50 AM

API Well Number: 43047545570000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9A PAD
Well: NBU 1022-9A1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.80°

Magnetic Field
Strength: 51981.8snT
Dip Angle: 65.78°
Date: 1/3/2014
Model: BGGM2013

WELL DETAILS: NBU 1022-9A1BS

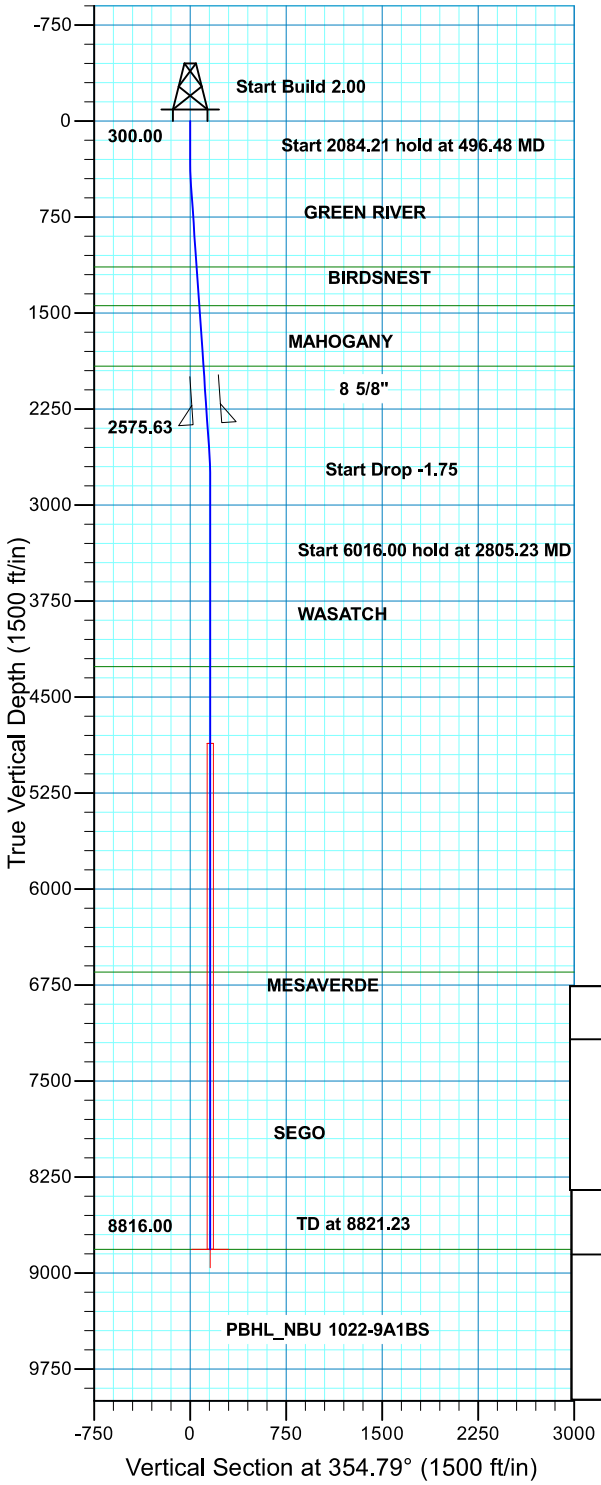
GL 5137 & KB 4 @ 5141.00ft (ASSUMED)

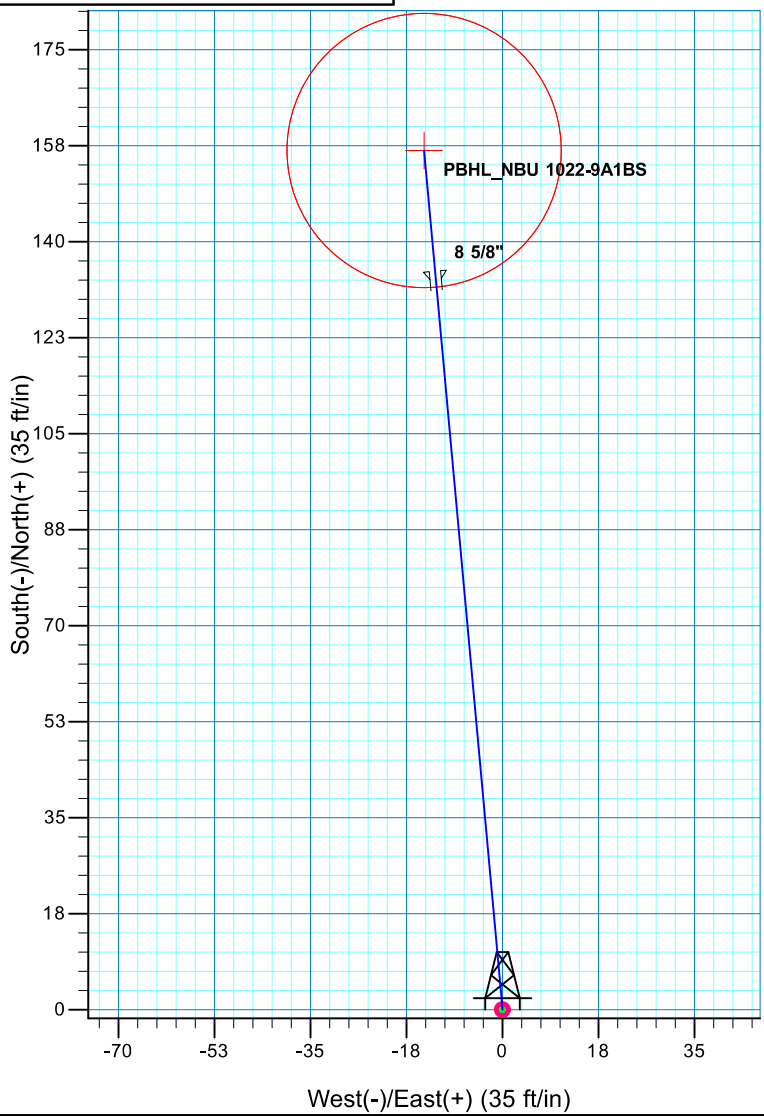
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14518876.37	2078509.53	39.9697680	-109.4364320

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8816.00	156.61	-14.29	14519032.71	2078492.50	39.9701980	-109.4364830	Circle (Radius: 25.00)

- plan hits target center





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
496.48	3.93	354.79	496.32	6.71	-0.61	2.00	354.79	6.73	
2580.68	3.93	354.79	2575.63	148.95	-13.59	0.00	0.00	149.57	
2805.23	0.00	0.00	2800.00	156.61	-14.29	1.75	180.00	157.26	
8821.23	0.00	0.00	8816.00	156.61	-14.29	0.00	0.00	157.26	PBHL_NBU 1022-9A1BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1141.00	1142.67	GREEN RIVER
1443.00	1445.38	BIRDSNEST
1916.00	1919.50	MAHOGANY
4263.00	4268.23	WASATCH
6650.00	6655.23	MESAVERDE
8816.00	8821.23	SEGO

Plan: PLAN #1 PRELIMINARY (NBU 1022-9A1BS/OH)
Created By: Robert Scott Date: 11:59, January 06 2014

RECEIVED: July 01, 2014

API Well Number: 43047545570000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9A PAD
Well: NBU 1022-9H1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

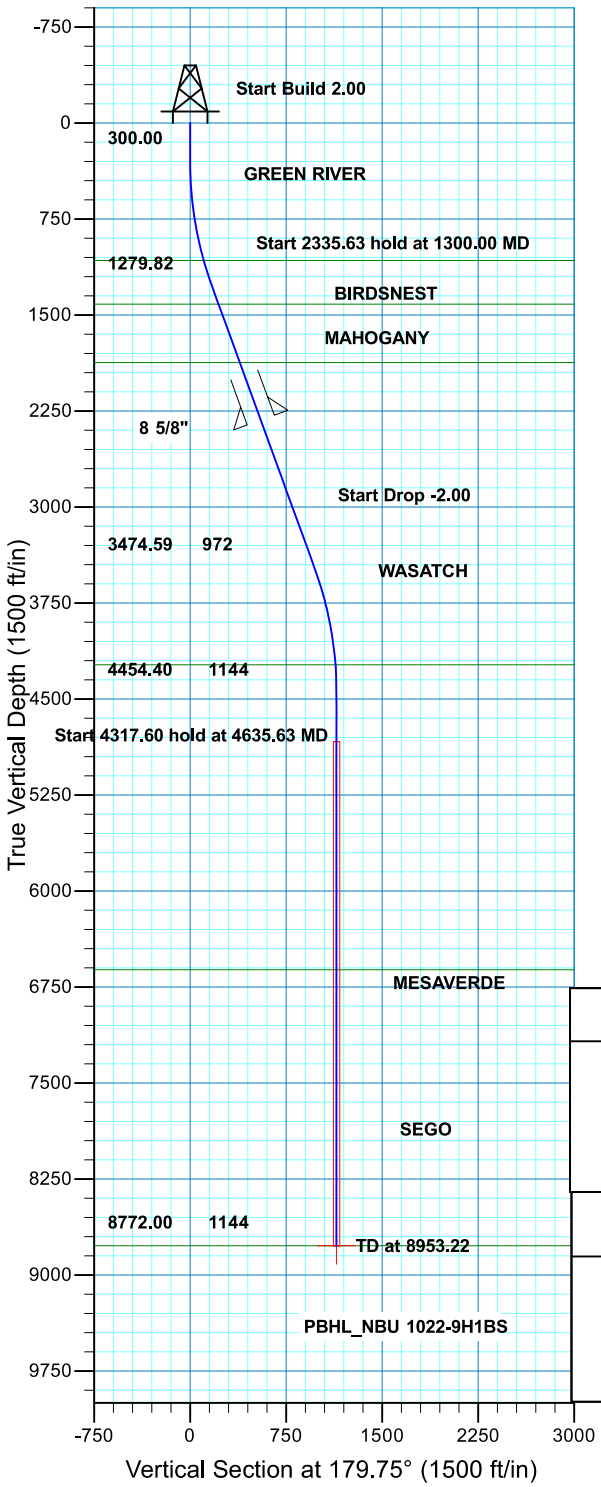
WELL DETAILS: NBU 1022-9H1BS					
GL 5137 & KB 4 @ 5141.00ft (ASSUMED)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14518868.96	2078502.65	39.9697480	-109.4364570

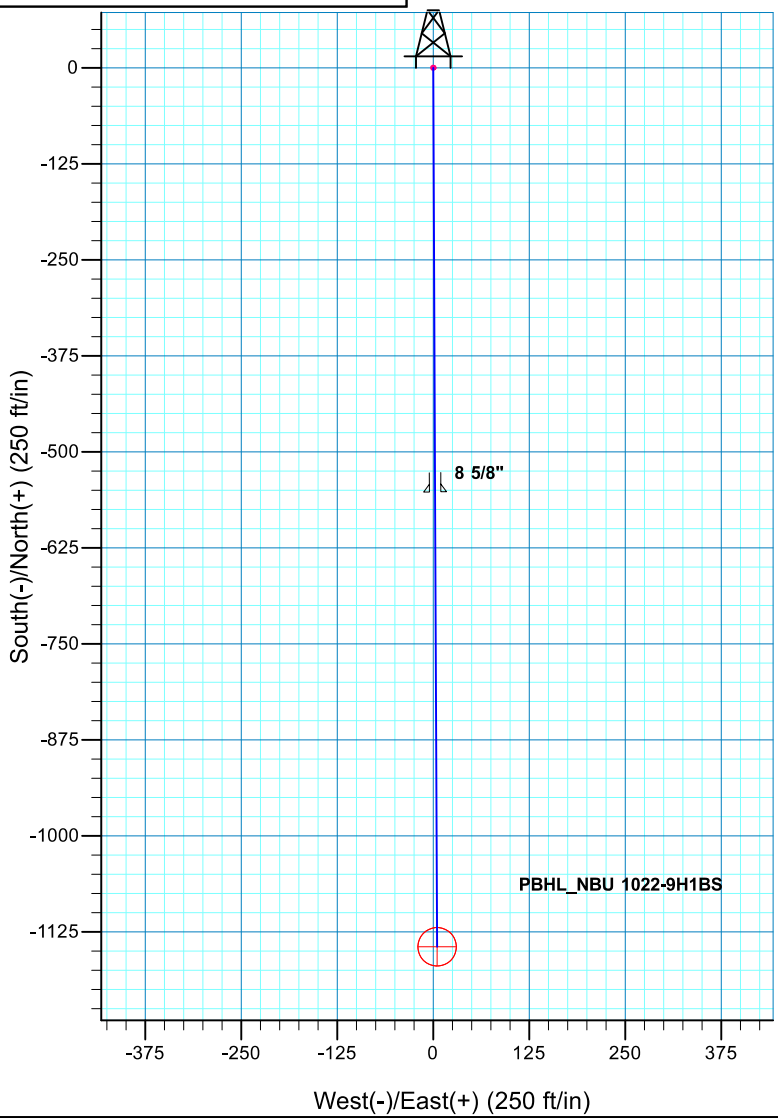
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8772.00	-1144.36	5.04	14517724.87	2078527.76	39.9666060	-109.4364390	Circle (Radius: 25.00)
- plan hits target center								

T M

Azimuths to True North
Magnetic North: 10.80°

Magnetic Field
Strength: 51981.8snT
Dip Angle: 65.78°
Date: 1/3/2014
Model: BGGM2013





SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1300.00	20.00	179.75	1279.82	-172.77	0.76	2.00	179.75	172.77	
3635.63	20.00	179.75	3474.59	-971.59	4.28	0.00	0.00	971.60	
4635.63	0.00	0.00	4454.40	-1144.36	5.04	2.00	180.00	1144.37	
8953.22	0.00	0.00	8772.00	-1144.36	5.04	0.00	0.00	1144.37	PBHL_NBU 1022-9H1BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1075.00	1084.78	GREEN RIVER
1417.00	1445.99	BIRDSNEST
1872.00	1930.19	MAHOGANY
4233.00	4414.00	WASATCH
6616.00	6797.22	MESAVERDE
8772.00	8953.22	SEGO

Plan: PLAN #1 PRELIMINARY (NBU 1022-9H1BS/OH)
Created By: Robert Scott Date: 12:02, January 06 2014

RECEIVED: July 01, 2014

API Well Number: 43047545570000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9A PAD
Well: NBU 1022-9H1CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.72°

Magnetic Field
Strength: 52066.1snT
Dip Angle: 65.79°
Date: 1/3/2014
Model: IGRF2010

WELL DETAILS: NBU 1022-9H1CS

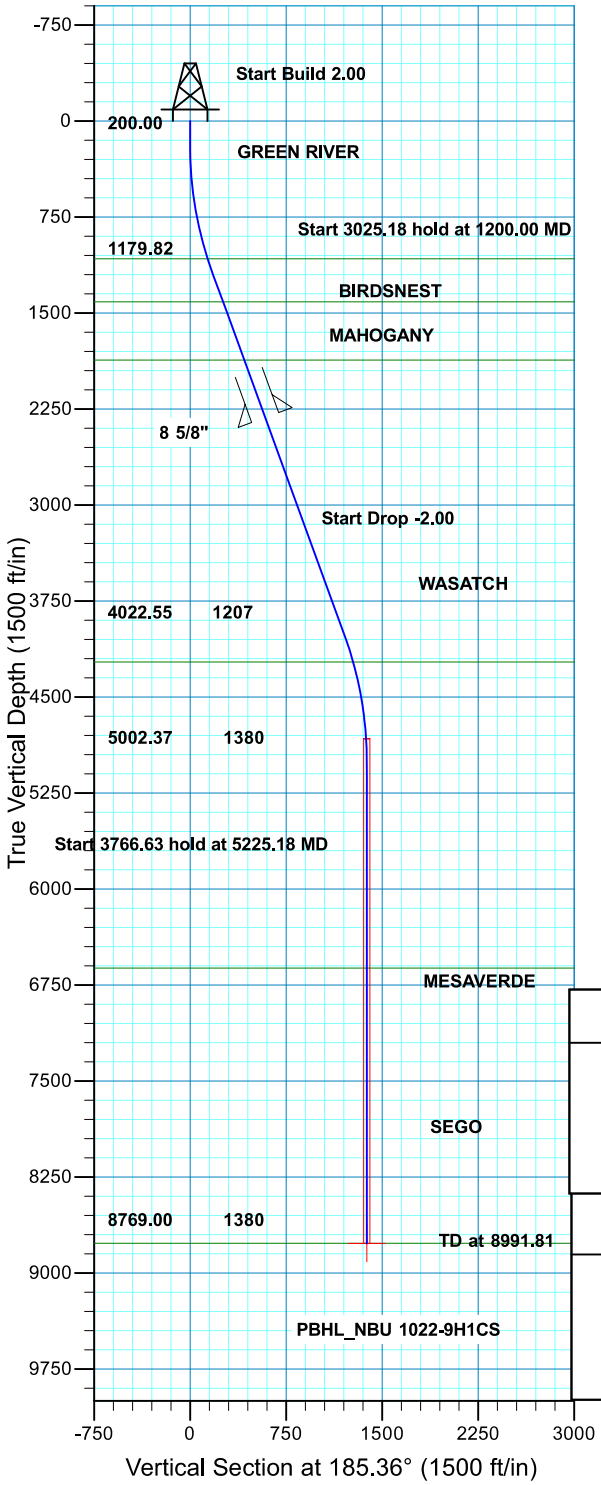
GL 5137 & KB 4 @ 5141.00ft (ASSUMED)

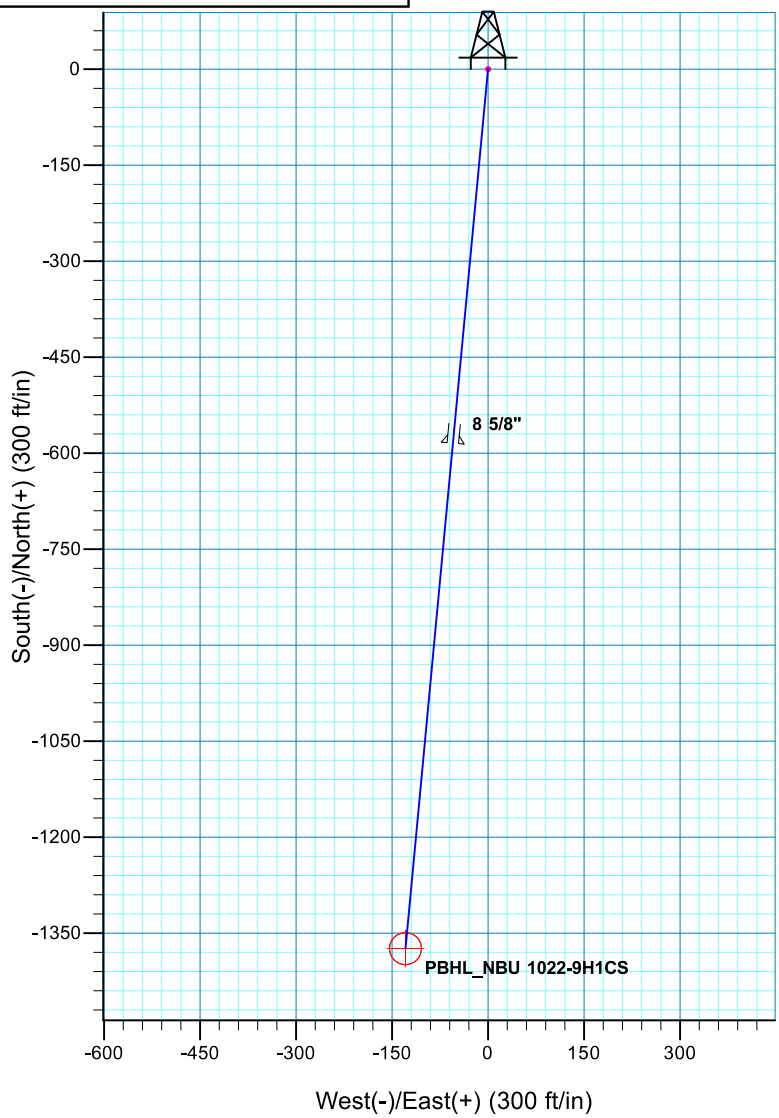
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14518854.16	2078489.18	39.9697080	-109.4365060

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8769.00	-1374.17	-128.92	14517477.94	2078384.37	39.9659350	-109.4369660	Circle (Radius: 25.00)

- plan hits target center





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
1200.00	20.00	185.36	1179.82	-172.01	-16.14	2.00	185.36	172.77	
4225.18	20.00	185.36	4022.55	-1202.16	-112.78	0.00	0.00	1207.44	
5225.18	0.00	0.00	5002.37	-1374.17	-128.92	2.00	180.00	1380.21	
8991.81	0.00	0.00	8769.00	-1374.17	-128.92	0.00	0.00	1380.21	PBHL_NBU 1022-9H1CS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	
1077.00	1091.31	GREEN RIVER	
1413.00	1448.15	BIRDSNEST	
1868.00	1932.35	MAHOGANY	
4228.00	4441.06	WASATCH	
6618.00	6840.81	MESAVERDE	
8768.99	8991.80	SEGO	0.00

Plan: PLAN #1 PRELIMINARY (NBU 1022-9H1CS/OH)
Created By: Robert Scott Date: 12:05, January 06 2014

RECEIVED: July 01, 2014

API Well Number: 43047545570000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9A PAD
Well: NBU 1022-9B4BS
Wellbore: OH
Design: PLAN #1 PRELIMINRAY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.80°

Magnetic Field
Strength: 51981.7snT
Dip Angle: 65.78°
Date: 1/3/2014
Model: BGGM2013

WELL DETAILS: NBU 1022-9B4BS

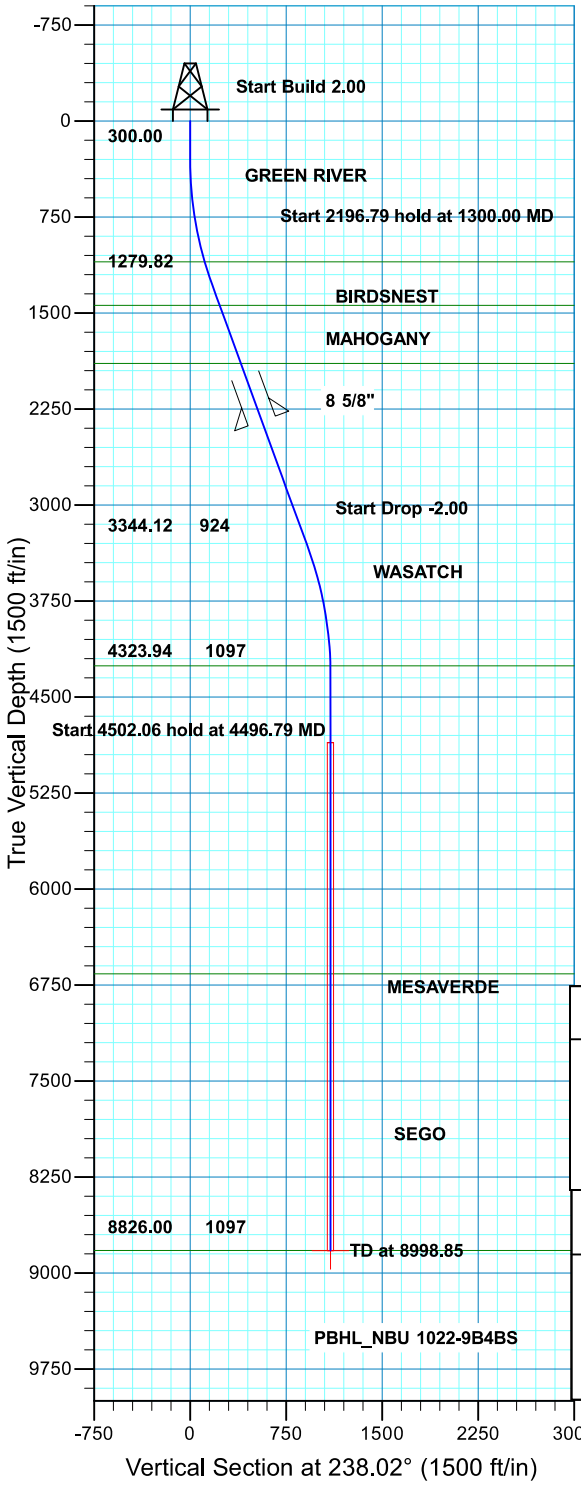
GL 5137 & KB 4 @ 5141.00ft (ASSUMED)

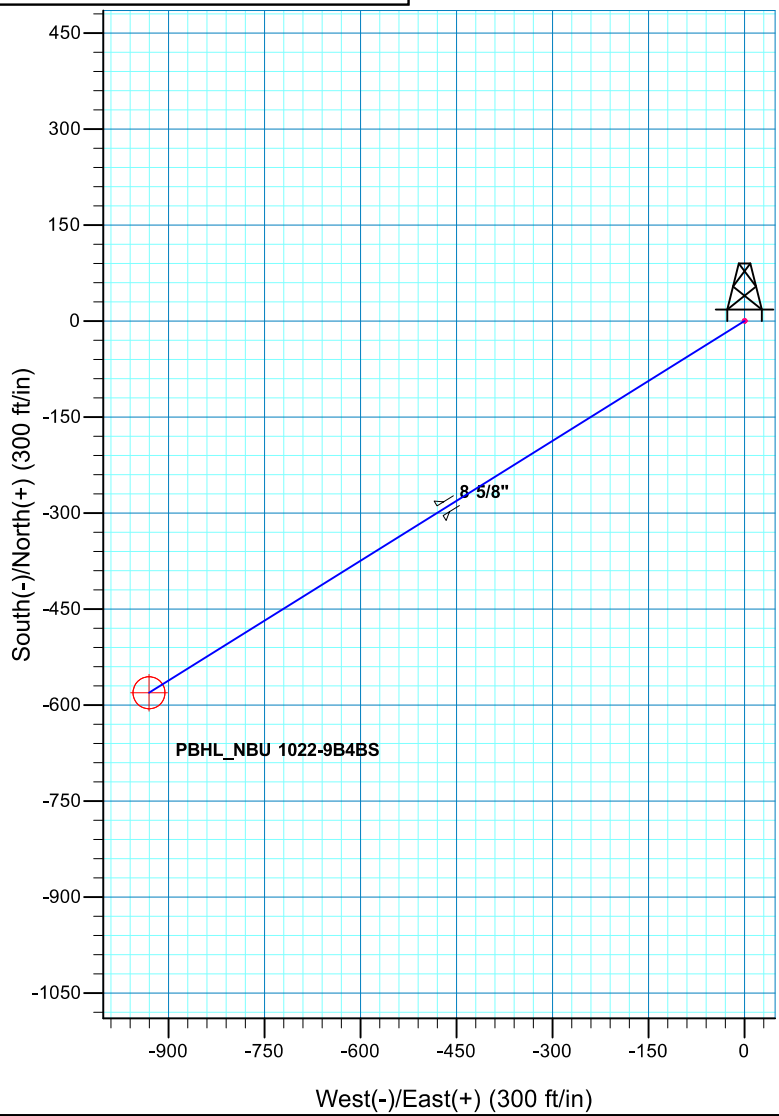
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14518847.11	2078482.30	39.9696890	-109.4365310

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8826.00	-580.90	-930.43	14518249.99	2077562.19	39.9680940	-109.4398510	Circle (Radius: 25.00)

- plan hits target center





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00
1300.00	20.00	238.02	1279.82	-91.50	-146.55	2.00	238.02	172.77
3496.79	20.00	238.02	3344.12	-489.40	-783.88	0.00	0.00	924.11
4496.79	0.00	0.00	4323.94	-580.90	-930.43	2.00	180.00	1096.88
8998.85	0.00	0.00	8826.00	-580.90	-930.43	0.00	0.00	1096.88

PBHL_NBU 1022-9B4BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

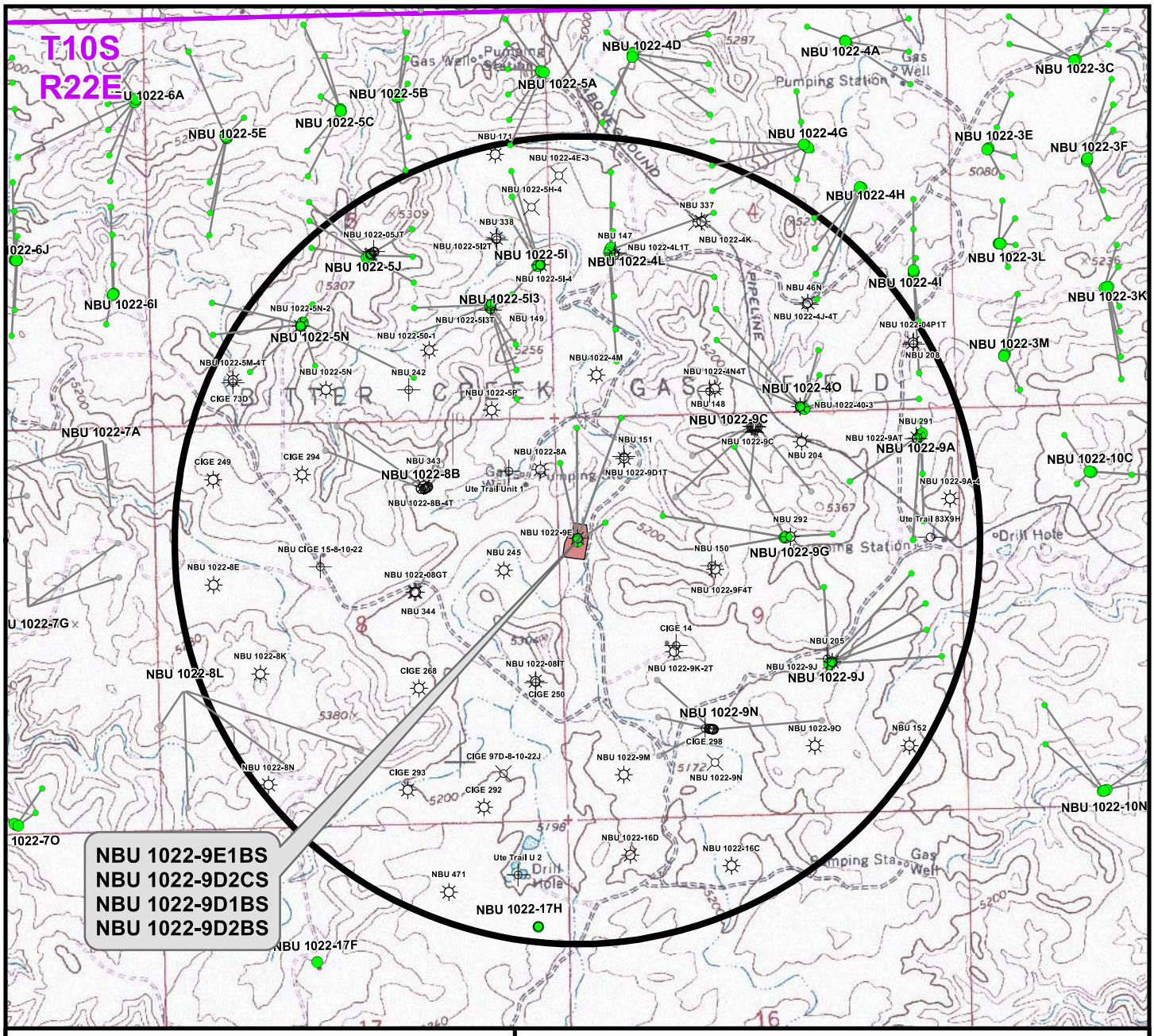
FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1102.00	1112.86	GREEN RIVER
1441.00	1471.53	BIRDSNEST
1895.00	1954.67	MAHOGANY
4257.00	4429.85	WASATCH
6664.00	6836.85	MESAVERDE
8825.99	8998.84	SEGO

Plan: PLAN #1 PRELIMINRAY (NBU 1022-9B4BS/OH)
Created By: Robert Scott Date: 12:01, January 06 2014

RECEIVED: July 01, 2014

API Well Number: 43047545570000



Well locations derived from Utah Division of Oil, Gas and Mining (UDOGM) (oilgas.ogm.utah.gov). The estimated distances from proposed bore locations to the nearest existing bore locations are based on UDOGM data.

Proposed Well	Nearest Well Bore	Footage
NBU 1022-9E1BS	NBU 1022-9E	±419ft
NBU 1022-9D2CS	NBU 1022-8A	±273ft
NBU 1022-9D1BS	NBU 151	±505ft
NBU 1022-9D2BS	NBU 151	±720ft

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Well - 1 Mile Radius
- Producing
- Spudded
- APD Approved
- Preliminary Location
- Deferred
- Cancelled
- Temporarily Abandoned
- Active Injector
- Location Abandoned
- Plugged & Abandoned
- Shut-In

WELL PAD - NBU 1022-9E

TOPO C
NBU 1022-9E1BS, NBU 1022-9D2CS
NBU 1022-9D1BS & NBU 1022-9D2BS
LOCATED IN SECTION 9, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 12
DRAWN: TL	DATE: 18 Nov 2013	12 OF 16
REVISED:	DATE:	

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API Well Number: 43047545570000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9E PAD
Well: NBU 1022-9E1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

WELL DETAILS: NBU 1022-9E1BS

GL 5115 & KB 4 @ 5119.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14517481.66	2073981.63	39.9661560	-109.4526730

DESIGN TARGET DETAILS

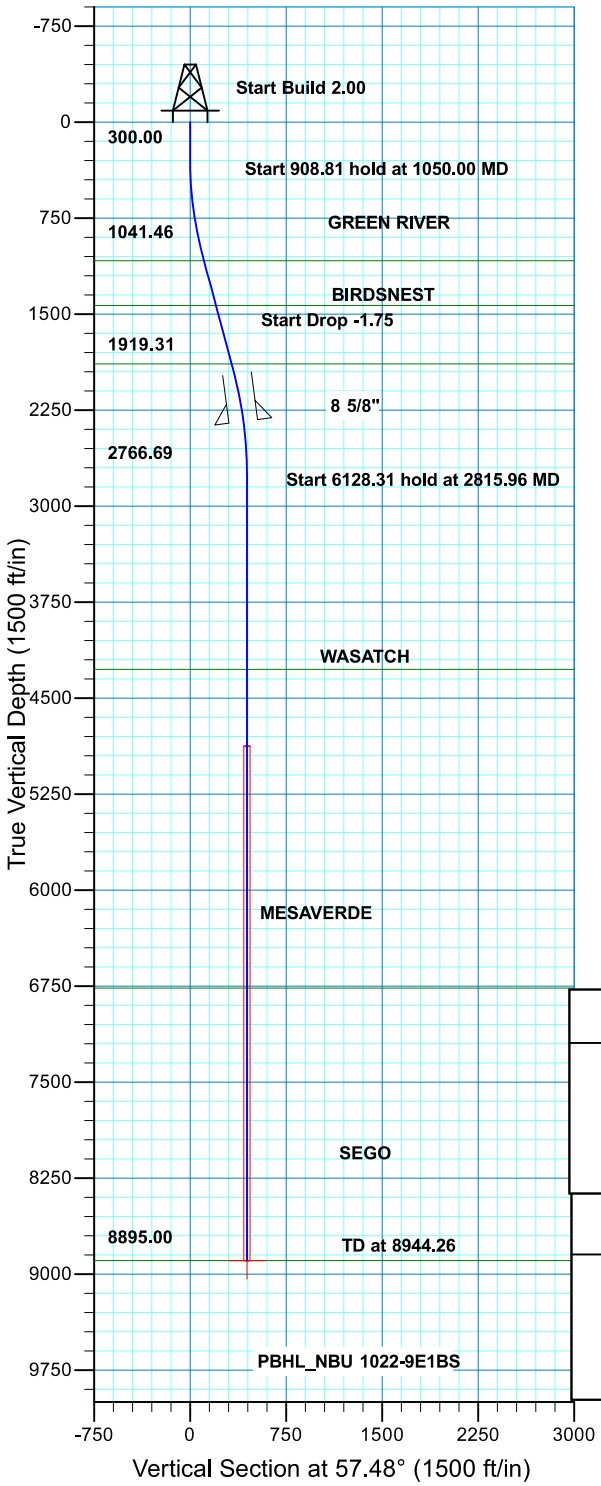
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8895.00	238.92	374.70	14517727.05	2074352.12	39.9668120	-109.4513360	Circle (Radius: 25.00)

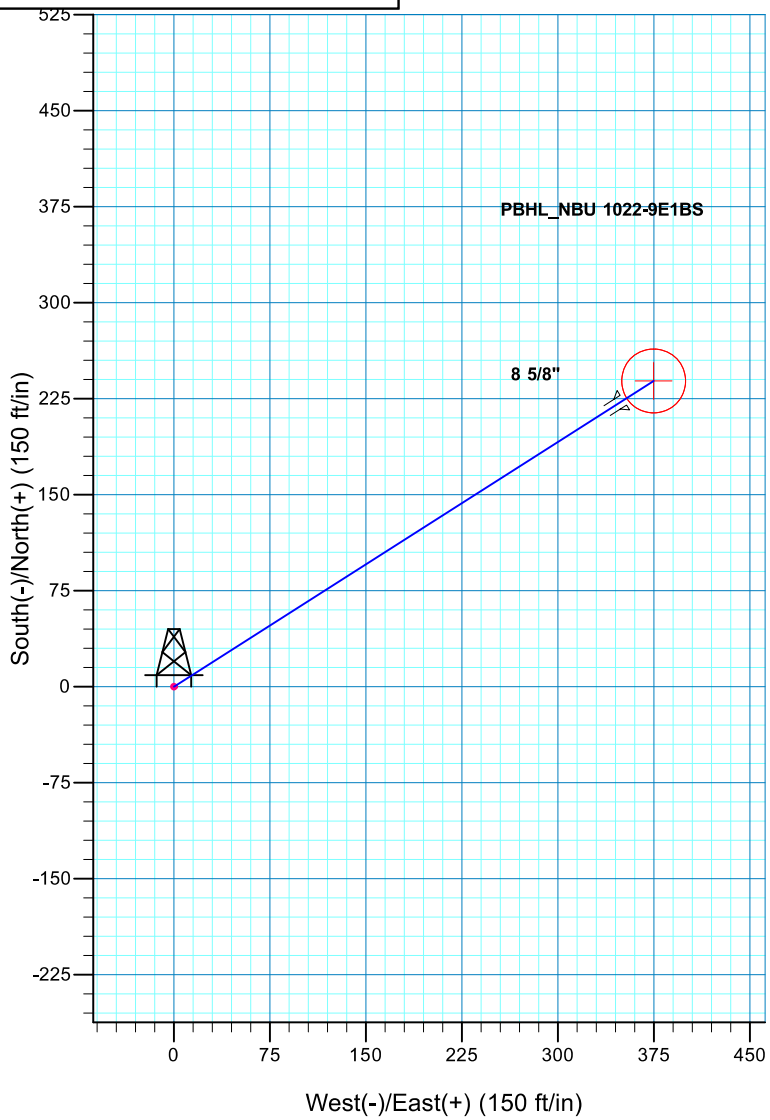
- plan hits target center

T M

Azimuths to True North
Magnetic North: 10.81°

Magnetic Field
Strength: 51977.7snT
Dip Angle: 65.77°
Date: 1/3/2014
Model: BGGM2013





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1050.00	15.00	57.48	1041.46	52.48	82.31	2.00	57.48	97.62	
1958.81	15.00	57.48	1919.31	178.95	280.64	0.00	0.00	332.83	
2815.96	0.00	0.00	2766.69	238.92	374.70	1.75	180.00	444.39	
8944.26	0.00	0.00	8895.00	238.92	374.70	0.00	0.00	444.39	PBHL_NBU 1022-9E1BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S 22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	
1083.00	1093.00	GREEN RIVER	
1433.00	1455.35	BIRDSNEST	
1889.00	1927.44	MAHOGANY	
4276.00	4325.26	WASATCH	
6765.00	6814.26	MESAVERDE	
8894.99	8944.25	SEGO	0.00

Plan: PLAN #1 PRELIMINARY (NBU 1022-9E1BS/OH)
Created By: Robert Scott Date: 12:19, January 06 2014

RECEIVED: July 02, 2014

API Well Number: 43047545570000

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9E PAD
Well: NBU 1022-9D2CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Scientific Drilling

Anadarko Petroleum Corporation

WELL DETAILS: NBU 1022-9D2CS

GL 5115 & KB 4 @ 5119.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude
0.00	0.00	14517491.52	2073983.14	39.9661830	-109.4526670

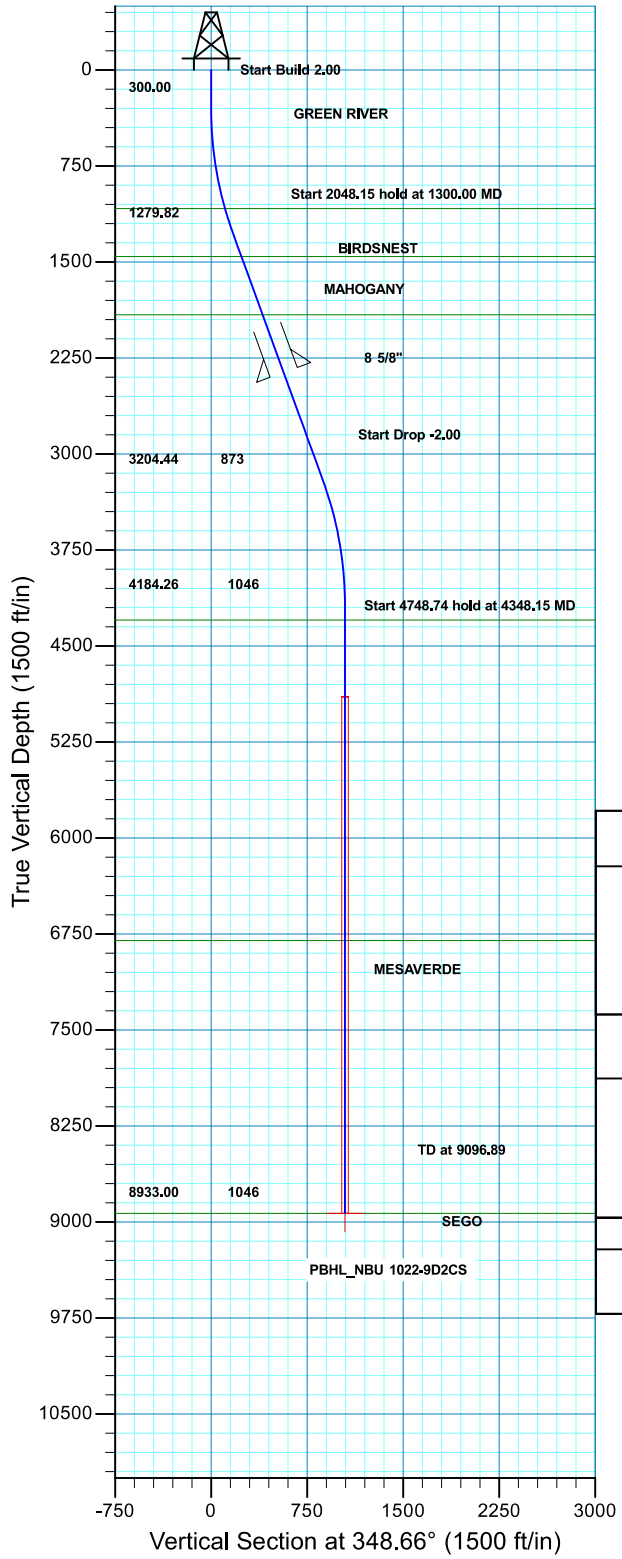
DESIGN TARGET DETAILS

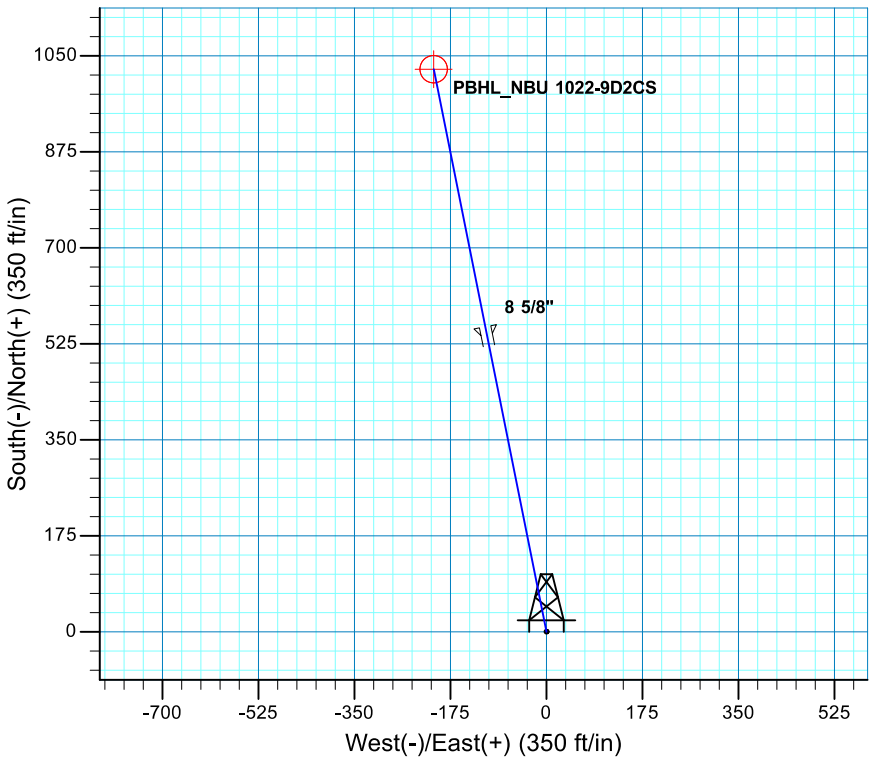
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8933.00	1025.62	-205.70	14518513.41	2073759.67	39.9689990	-109.4534010	Circle (Radius: 25.00)

- plan hits target center

T
Azimuths to True North
Magnetic North: 10.81°

Magnetic Field
Strength: 51977.7snT
Dip Angle: 65.77°
Date: 2014/01/03
Model: BGGM2013





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1300.00	20.00	348.66	1279.82	169.39	-33.97	2.00	348.66	172.77	
3348.15	20.00	348.66	3204.44	856.22	-171.73	0.00	0.00	873.28	
4348.15	0.00	0.00	4184.26	1025.62	-205.70	2.00	180.00	1046.04	
9096.89	0.00	0.00	8933.00	1025.62	-205.70	0.00	0.00	1046.04	PBHL_NBU 1022-9D2CS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S 22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1081.00	1091.01	GREEN RIVER
1457.00	1488.56	BIRDSNEST
1913.00	1973.82	MAHOGANY
4298.00	4461.89	WASATCH
6801.00	6964.89	MESAVERDE
8932.99	9096.88	SEGO

CASING DETAILS

TVD	MD	Name	Size
2363.00	2452.70	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 1022-9D2CS/OH)
Created By: RobertScott Date: 14:50, January 17 2014

Received: July 02, 2014

API Well Number: 43047545570000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9E PAD
Well: NBU 1022-9D2BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.81°

Magnetic Field
Strength: 51977.7snT
Dip Angle: 65.77°
Date: 1/3/2014
Model: BGGM2013

WELL DETAILS: NBU 1022-9D2BS

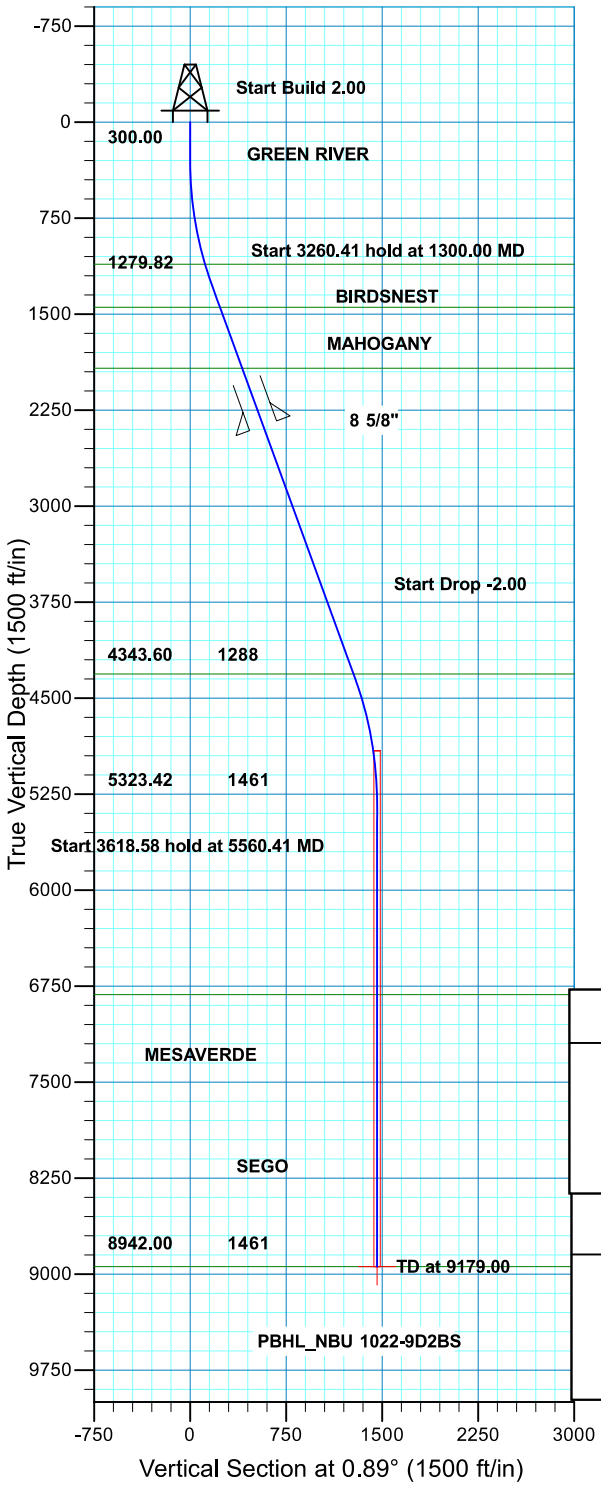
GL 5115 & KB 4 @ 5119.00ft (ASSUMED)

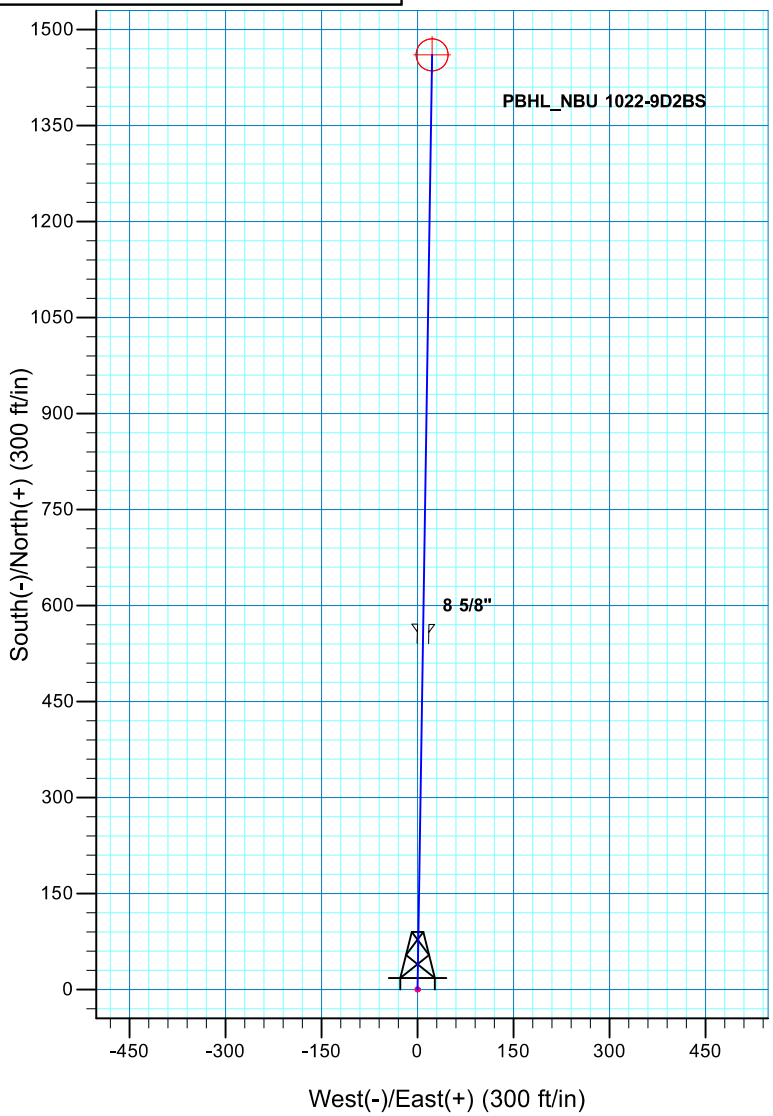
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14517511.24	2073986.16	39.9662370	-109.4526550

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8942.00	1460.49	22.70	14518971.90	2073983.52	39.9702470	-109.4525740	Circle (Radius: 25.00)

- plan hits target center





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1300.00	20.00	0.89	1279.82	172.75	2.68	2.00	0.89	172.77	
4560.41	20.00	0.89	4343.60	1287.74	20.01	0.00	0.00	1287.89	
5560.41	0.00	0.00	5323.42	1460.49	22.70	2.00	180.00	1460.66	
9179.00	0.00	0.00	8942.00	1460.49	22.70	0.00	0.00	1460.66	PBHL_NBU 1022-9D2BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S 22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	
1110.00	1121.20	GREEN RIVER	
1446.00	1476.85	BIRDSNEST	
1923.00	1984.46	MAHOGANY	
4312.00	4526.78	WASATCH	
6816.00	7053.00	MESAVERDE	
8941.99	9178.99	SEGO	0.00

Plan: PLAN #1 PRELIMINARY (NBU 1022-9D2BS/OH)
Created By: Robert Scott Date: 12:15, January 06 2014

RECEIVED: July 02, 2014

API Well Number: 43047545570000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9E PAD
Well: NBU 1022-9D1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

WELL DETAILS: NBU 1022-9D1BS

GL 5115 & KB 4 @ 5119.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14517501.38	2073984.65	39.9662100	-109.4526610

DESIGN TARGET DETAILS

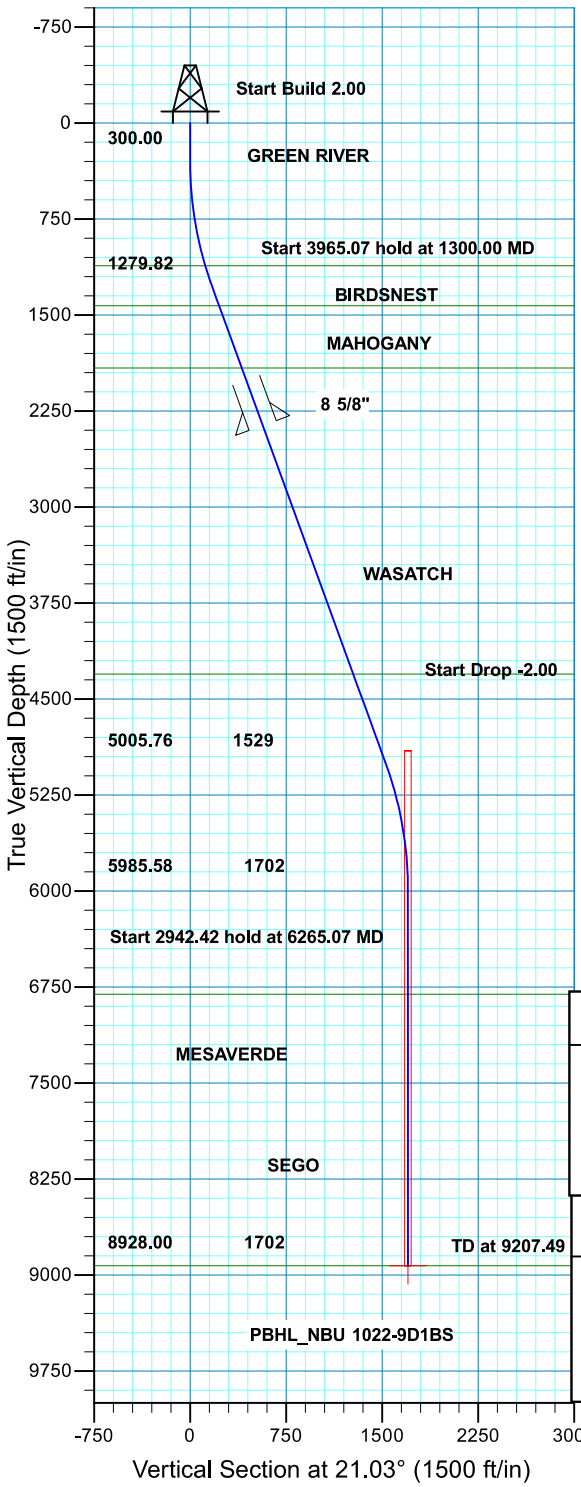
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8928.00	1588.33	610.64	14519100.07	2074567.64	39.9705710	-109.4504820	Circle (Radius: 25.00)

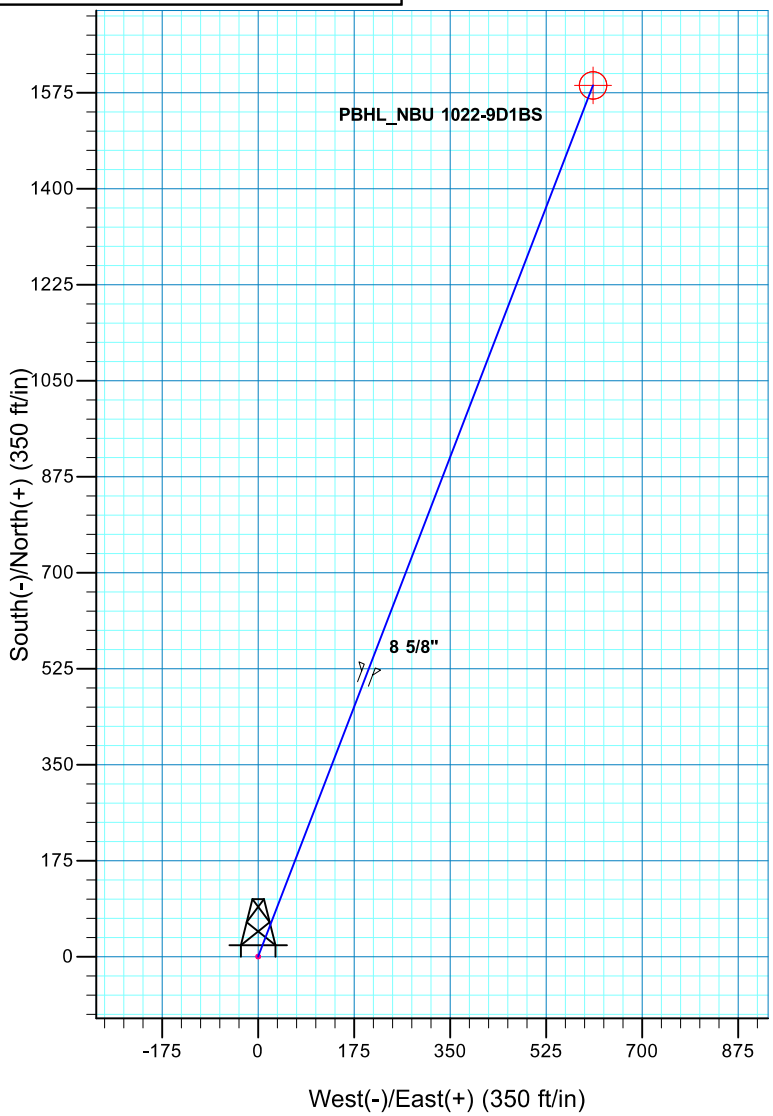
- plan hits target center

T M

Azimuths to True North
Magnetic North: 10.81°

Magnetic Field
Strength: 51977.7snT
Dip Angle: 65.77°
Date: 1/3/2014
Model: BGGM2013





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00
1300.00	20.00	21.03	1279.82	161.26	62.00	2.00	21.03	172.77
5265.07	20.00	21.03	5005.76	1427.07	548.64	0.00	0.00	1528.90
6265.07	0.00	0.00	5985.58	1588.33	610.64	2.00	180.00	1701.67
9207.49	0.00	0.00	8928.00	1588.33	610.64	0.00	0.00	1701.67

PBHL_NBU 1022-9D1BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S 22E
System Datum: Mean Sea Level

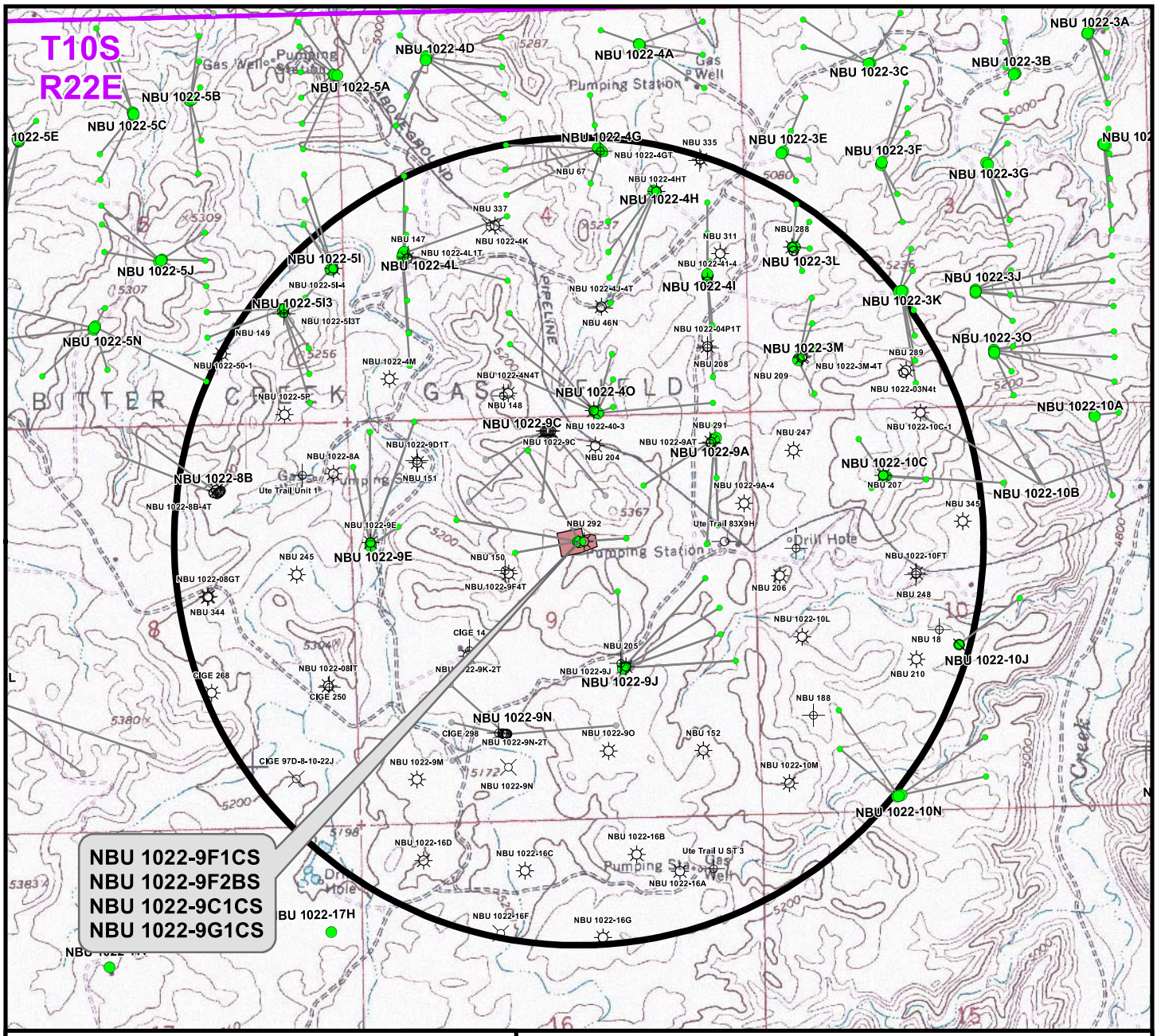
FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1117.00	1128.50	GREEN RIVER
1429.00	1458.76	BIRDSNEST
1915.00	1975.95	MAHOGANY
4306.00	4520.40	WASATCH
6807.00	7086.49	MESAVERDE
8928.00	9207.49	SEGO

Plan: PLAN #1 PRELIMINARY (NBU 1022-9D1BS/OH)
Created By: Robert Scott Date: 12:15, January 06 2014

RECEIVED: July 01, 2014

API Well Number: 43047545570000



Well locations derived from Utah Division of Oil, Gas and Mining (UDOGM) (oilgas.ogm.utah.gov). The estimated distances from proposed bore locations to the nearest existing bore locations are based on UDOGM data.

Proposed Well	Nearest Well Bore	Footage
NBU 1022-9F1CS	NBU 150	±268ft
NBU 1022-9F2BS	NBU 1022-9C3CS BH	±291ft
NBU 1022-9C1CS	NBU 1022-9C	±365ft
NBU 1022-9G1CS	NBU 292	±558ft

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Well - 1 Mile Radius
- Producing
- Spudded
- APD Approved
- Preliminary Location
- Deferred
- Cancelled
- Temporarily Abandoned
- Active Injector
- Location Abandoned
- Plugged & Abandoned
- Shut-In

WELL PAD - NBU 1022-9G

TOPO C
NBU 1022-9F1CS, NBU 1022-9F2BS, NBU 1022-9C1CS & NBU 1022-9G1CS
LOCATED IN SECTION 9, T10S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 12
DRAWN: TL	DATE: 18 Nov 2013	12 OF 16
REVISED:	DATE:	

K:\ANADARKO\2013\2013_55_NBU_1022-9_FOCUS\GIS\Maps_ABCDE\NBU 1022-9G\NBU 1022-9G_C.mxd11/22/2013 2:00:40 PM

API Well Number: 43047545570000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9G PAD
Well: NBU 1022-9F1CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

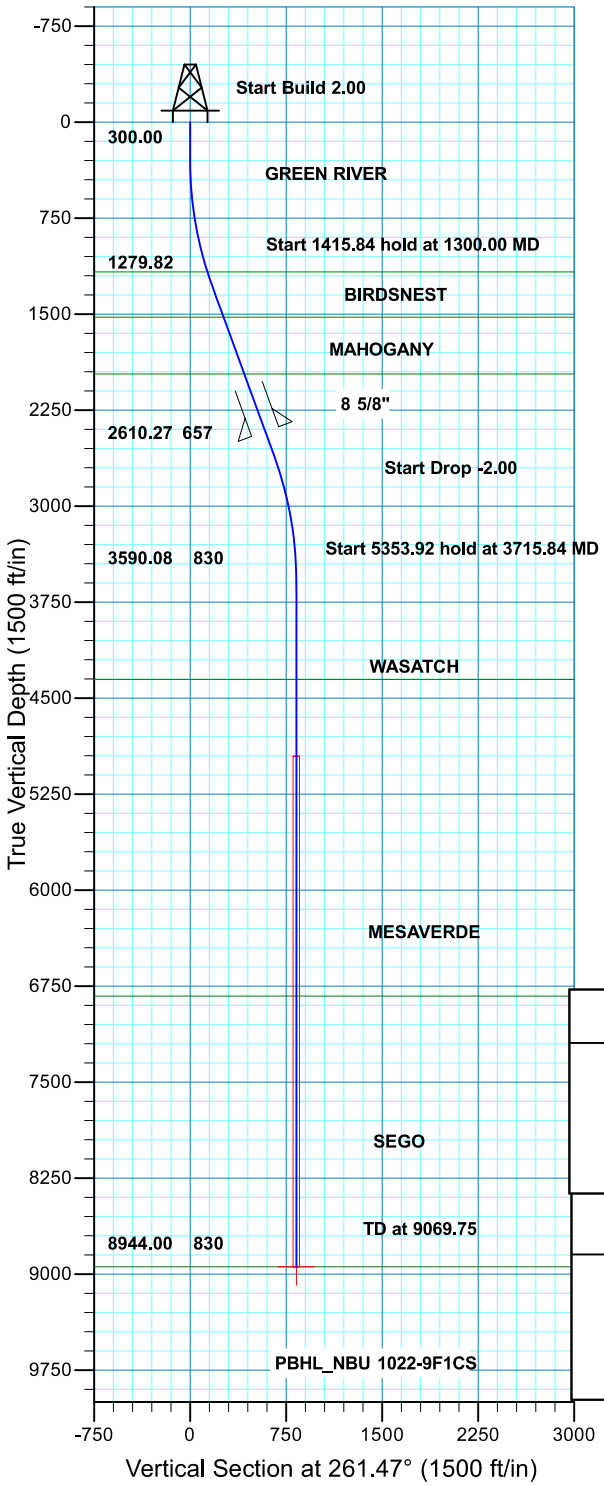
WELL DETAILS: NBU 1022-9F1CS					
GL 5228 & KB 4 @ 5232.00ft (ASSUMED)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14517520.87	2076694.81	39.9661340	-109.4429910

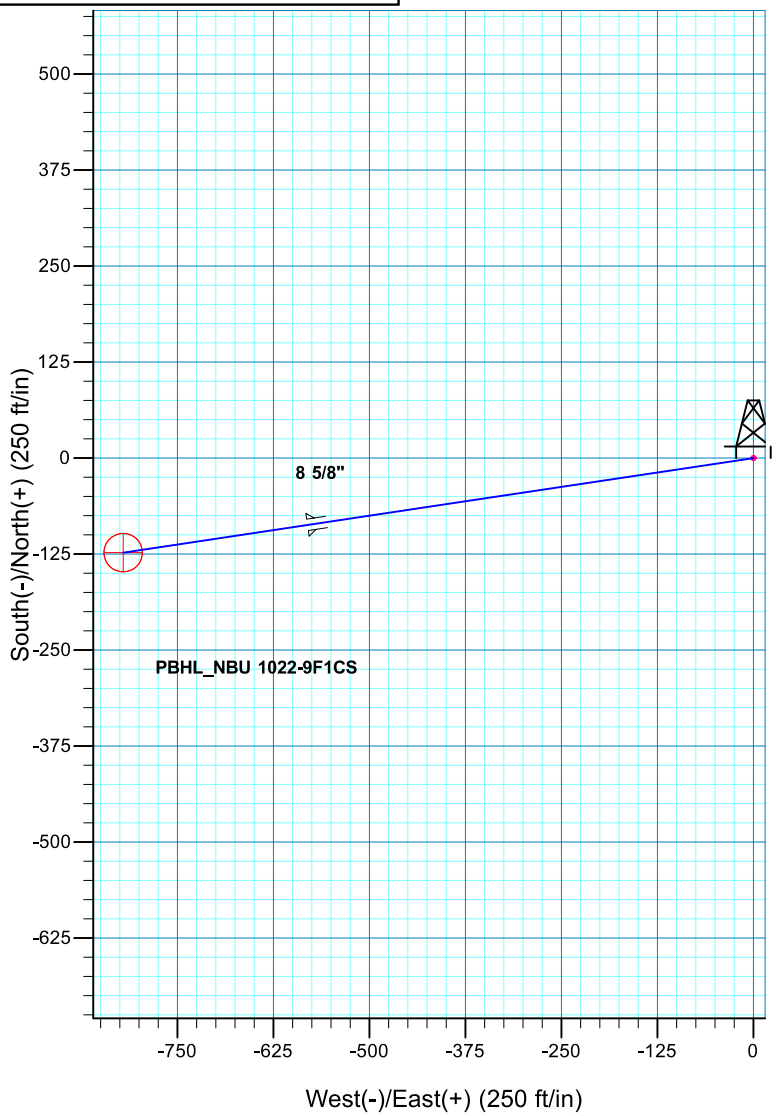
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL - plan hits target center	8944.00	-123.09	-820.60	14517383.47	2075876.48	39.9657960	-109.4459190	Circle (Radius: 25.00)

T M

Azimuths to True North
Magnetic North: 10.80°

Magnetic Field
Strength: 51978.2snT
Dip Angle: 65.77°
Date: 1/3/2014
Model: BGGM2013





SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1300.00	20.00	261.47	1279.82	-25.63	-170.86	2.00	261.47	172.77	
2715.84	20.00	261.47	2610.27	-97.46	-649.74	0.00	0.00	657.01	
3715.84	0.00	0.00	3590.08	-123.09	-820.60	2.00	180.00	829.78	
9069.75	0.00	0.00	8944.00	-123.09	-820.60	0.00	0.00	829.78	PBHL_NBU 1022-9F1CS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1171.00	1185.01	GREEN RIVER
1524.00	1559.86	BIRDSNEST
1968.00	2032.35	MAHOGANY
4355.00	4480.75	WASATCH
6829.00	6954.75	MESAVERDE
8944.00	9069.75	SEGO

Plan: PLAN #1 PRELIMINARY (NBU 1022-9F1CS/OH)
Created By: Robert Scott Date: 12:29 Thursday Jan 16 2014

RECEIVED: July 02, 2014

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
440 West 200 South, Suite 500
Salt Lake City, UT 84101

IN REPLY REFER TO:
3160
(UT-922)

July 7, 2014

Memorandum

To: Assistant Field Office Manager Minerals,
Vernal Field Office

From: Michael Coulthard, Petroleum Engineer

Subject: 2014 Plan of Development Natural Buttes Unit
Uintah County, Utah.

Pursuant to email between Diana Mason, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2014 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
NBU 1022-9A PAD		
43-047-54546	NBU 1022-9A1BS	Sec 09 T10S R22E 0383 FNL 0489 FEL BHL Sec 09 T10S R22E 0226 FNL 0503 FEL
43-047-54551	NBU 1022-9H1BS	Sec 09 T10S R22E 0397 FNL 0503 FEL BHL Sec 09 T10S R22E 1535 FNL 0492 FEL
43-047-54552	NBU 1022-9H1CS	Sec 09 T10S R22E 0405 FNL 0510 FEL BHL Sec 09 T10S R22E 1778 FNL 0640 FEL
43-047-54557	NBU 1022-9B4BS	Sec 09 T10S R22E 0412 FNL 0517 FEL BHL Sec 09 T10S R22E 0984 FNL 1448 FEL
NBU 1022-9E PAD		
43-047-54553	NBU 1022-9E1BS	Sec 09 T10S R22E 1683 FNL 0245 FWL BHL Sec 09 T10S R22E 1443 FNL 0621 FWL
43-047-54554	NBU 1022-9D2CS	Sec 09 T10S R22E 1673 FNL 0247 FWL BHL Sec 09 T10S R22E 0647 FNL 0044 FWL
43-047-54555	NBU 1022-9D2BS	Sec 09 T10S R22E 1653 FNL 0251 FWL BHL Sec 09 T10S R22E 0192 FNL 0277 FWL
43-047-54556	NBU 1022-9D1BS	Sec 09 T10S R22E 1663 FNL 0249 FWL BHL Sec 09 T10S R22E 0073 FNL 0864 FWL

RECEIVED: July 09, 2014

API #	WELL NAME	LOCATION

(Proposed PZ WASATCH-MESA VERDE)

NBU 1022-9G PAD

43-047-54558 NBU 1022-9F1CS Sec 09 T10S R22E 1690 FNL 2329 FEL
BHL Sec 09 T10S R22E 1811 FNL 2139 FWL

This office has no objection to permitting the wells at this time.

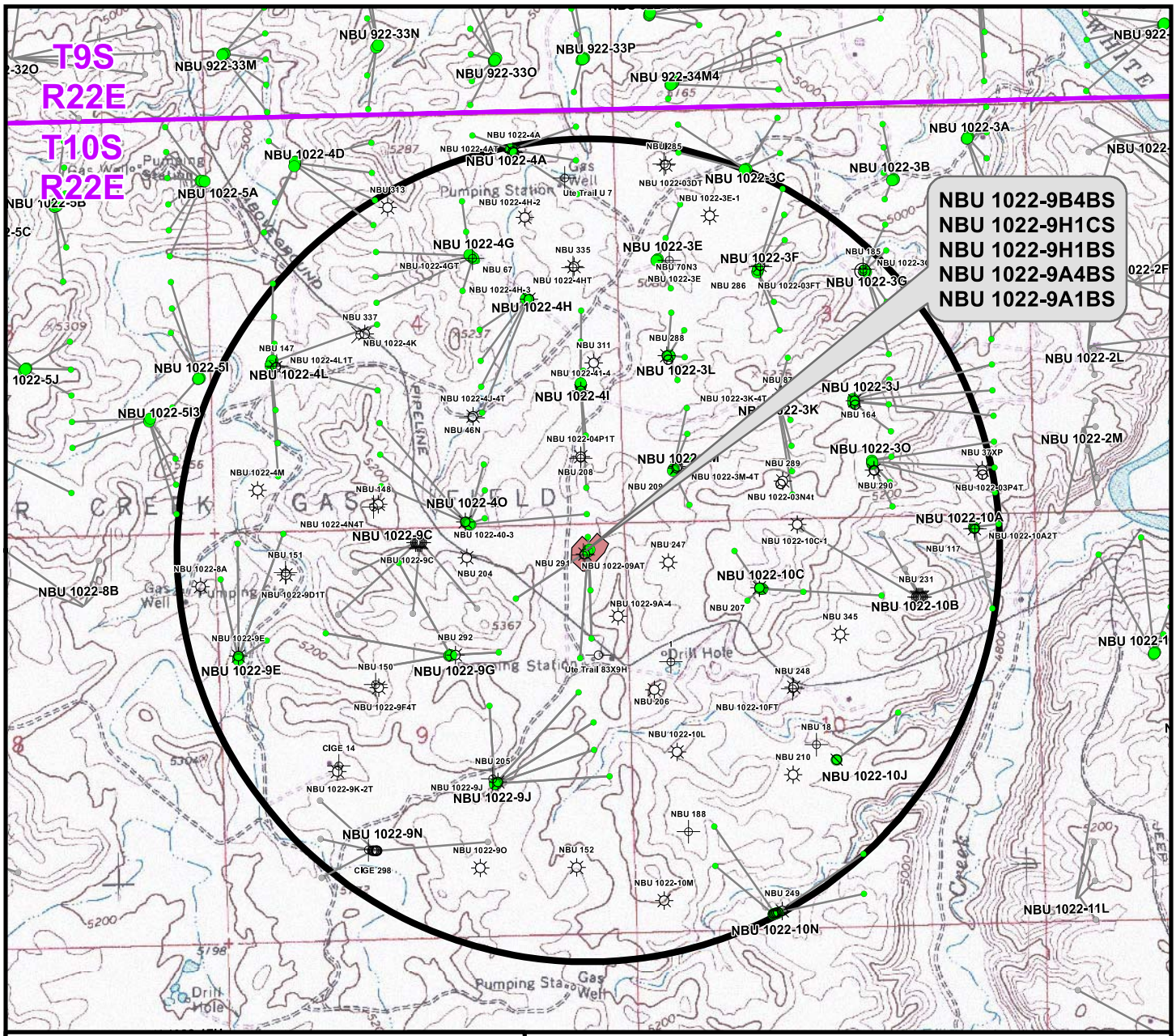
Michael Coulthard

Digitally signed by Michael Coulthard
DN: cn=Michael Coulthard, o=Bureau of Land Management, ou=Division of Minerals, email=mcoultha@blm.gov, c=US
Date: 2014.07.07 09:41:49 -06'00'

bcc: File - Natural Buttes Unit
Division of Oil Gas and Mining
Central Files
Agr. Sec. Chron
Fluid Chron

MCoulthard:mc:7-7-14

RECEIVED: July 09, 2014



Well locations derived from Utah Division of Oil, Gas and Mining (UDOGM) (oilgas.ogm.utah.gov). The estimated distances from proposed bore locations to the nearest existing bore locations are based on UDOGM data.

Proposed Well	Nearest Well Bore	Footage
NBU 1022-9B4BS	NBU 1022-9B4CS BH	±522ft
NBU 1022-9H1CS	Ute Trail 83X9H	±231ft
NBU 1022-9H1BS	Ute Trail 83X9H	±224ft
NBU 1022-9A4BS	NBU 291	±462ft
NBU 1022-9A1BS	NBU 1022-09AT	±227ft

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Well - 1 Mile Radius
- Producing
- Spudded
- APD Approved
- Preliminary Location
- Deferred
- Cancelled
- Temporarily Abandoned
- Active Injector
- Location Abandoned
- Plugged & Abandoned
- Shut-In

WELL PAD - NBU 1022-9A

TOPO C
NBU 1022-9B4BS,
NBU 1022-9H1CS, NBU 1022-9H1BS
NBU 1022-9A4BS & NBU 1022-9A1BS
LOCATED IN SECTION 9, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 13
DRAWN: TL	DATE: 18 Nov 2013	13 OF 17
REVISED:	DATE:	

K:\ANADARKO\2013\2013_55_NBU_1022-9_FOCUS\GIS\Maps_ABCDE\NBU 1022-9A\NBU 1022-9A_C.mxd 11/22/2013 10:59:50 AM

API Well Number: 43047545570000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9A PAD
Well: NBU 1022-9A1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.80°

Magnetic Field
Strength: 51981.8snT
Dip Angle: 65.78°
Date: 1/3/2014
Model: BGGM2013

WELL DETAILS: NBU 1022-9A1BS

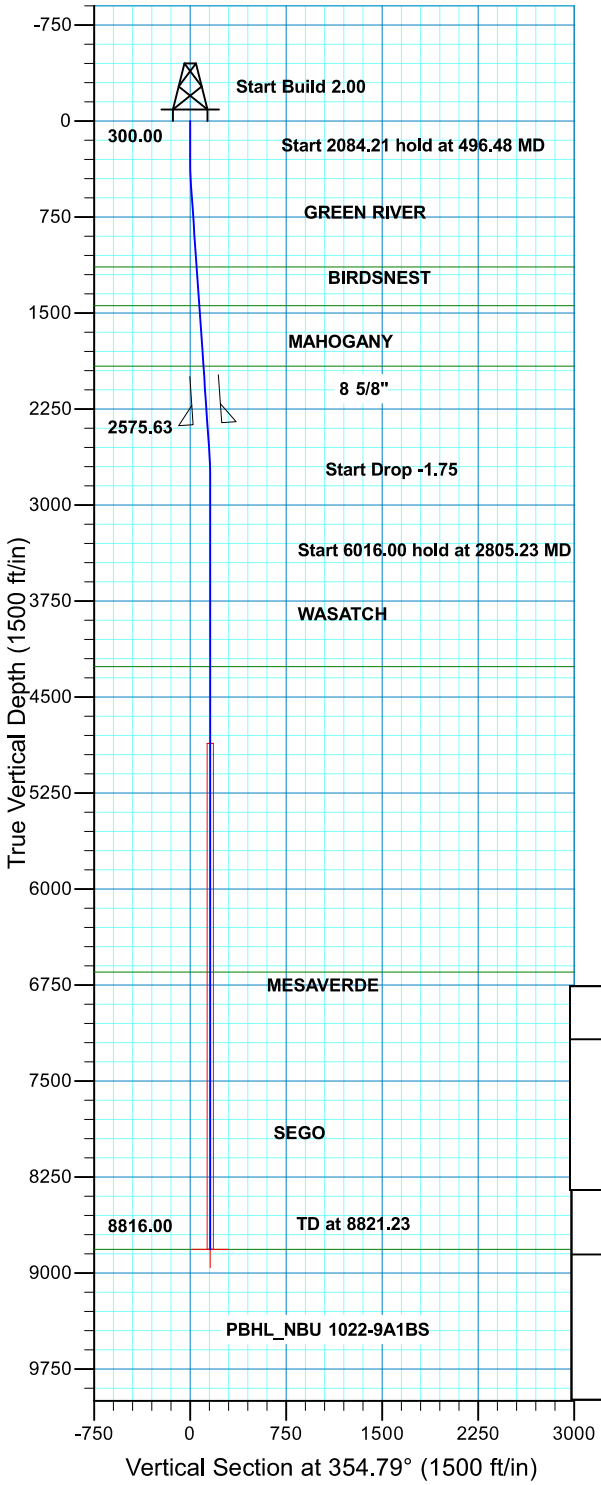
GL 5137 & KB 4 @ 5141.00ft (ASSUMED)

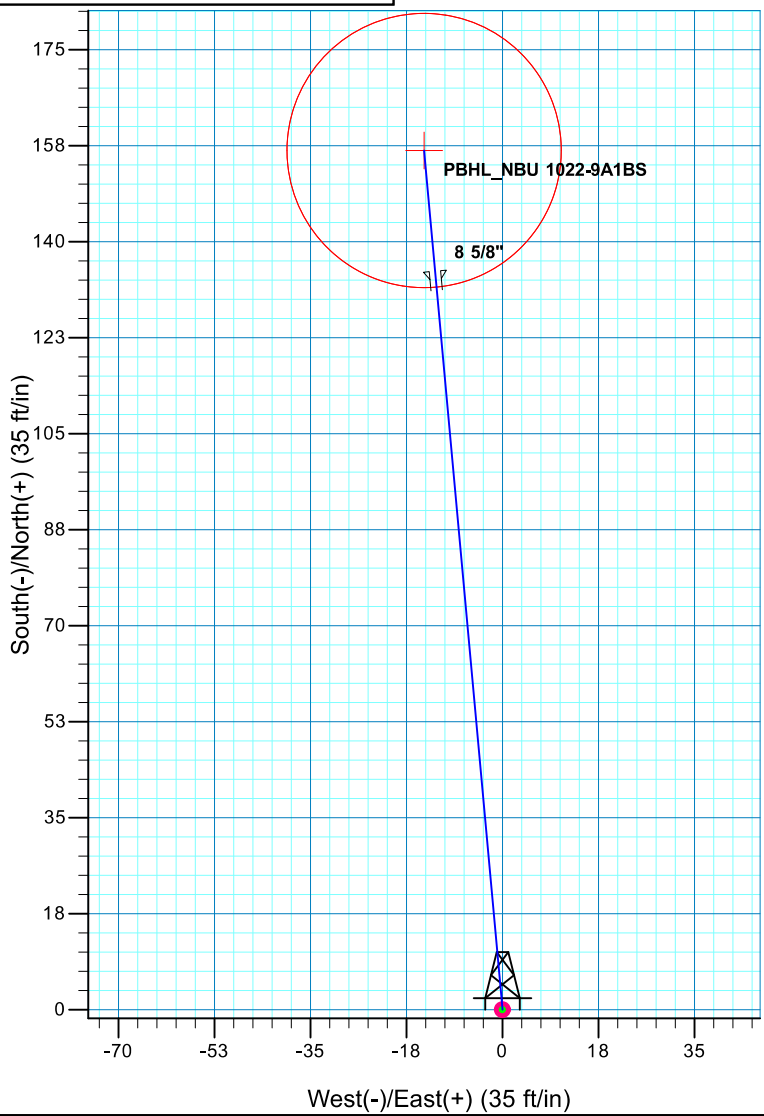
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14518876.37	2078509.53	39.9697680	-109.4364320

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8816.00	156.61	-14.29	14519032.71	2078492.50	39.9701980	-109.4364830	Circle (Radius: 25.00)

- plan hits target center





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
496.48	3.93	354.79	496.32	6.71	-0.61	2.00	354.79	6.73	
2580.68	3.93	354.79	2575.63	148.95	-13.59	0.00	0.00	149.57	
2805.23	0.00	0.00	2800.00	156.61	-14.29	1.75	180.00	157.26	
8821.23	0.00	0.00	8816.00	156.61	-14.29	0.00	0.00	157.26	PBHL_NBU 1022-9A1BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1141.00	1142.67	GREEN RIVER
1443.00	1445.38	BIRDSNEST
1916.00	1919.50	MAHOGANY
4263.00	4268.23	WASATCH
6650.00	6655.23	MESAVERDE
8816.00	8821.23	SEGO

Plan: PLAN #1 PRELIMINARY (NBU 1022-9A1BS/OH)
Created By: Robert Scott Date: 11:59, January 06 2014

RECEIVED: July 01, 2014

API Well Number: 43047545570000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9A PAD
Well: NBU 1022-9H1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

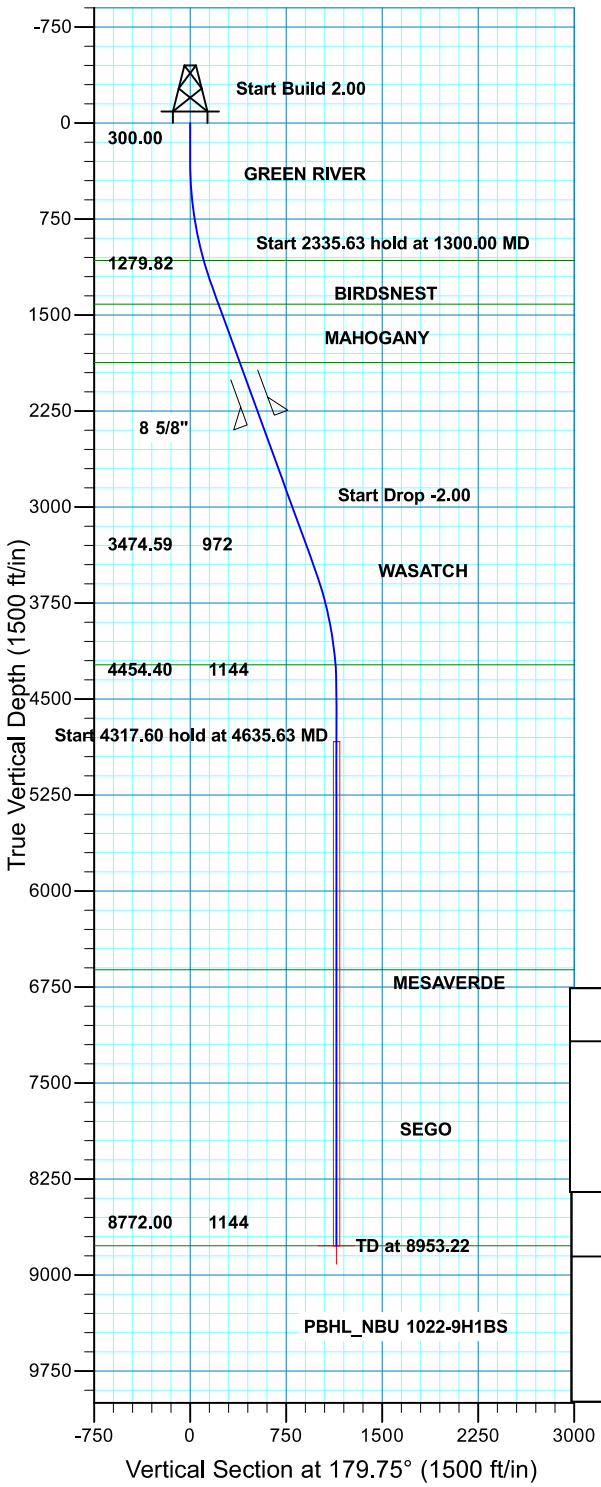
WELL DETAILS: NBU 1022-9H1BS					
GL 5137 & KB 4 @ 5141.00ft (ASSUMED)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14518868.96	2078502.65	39.9697480	-109.4364570

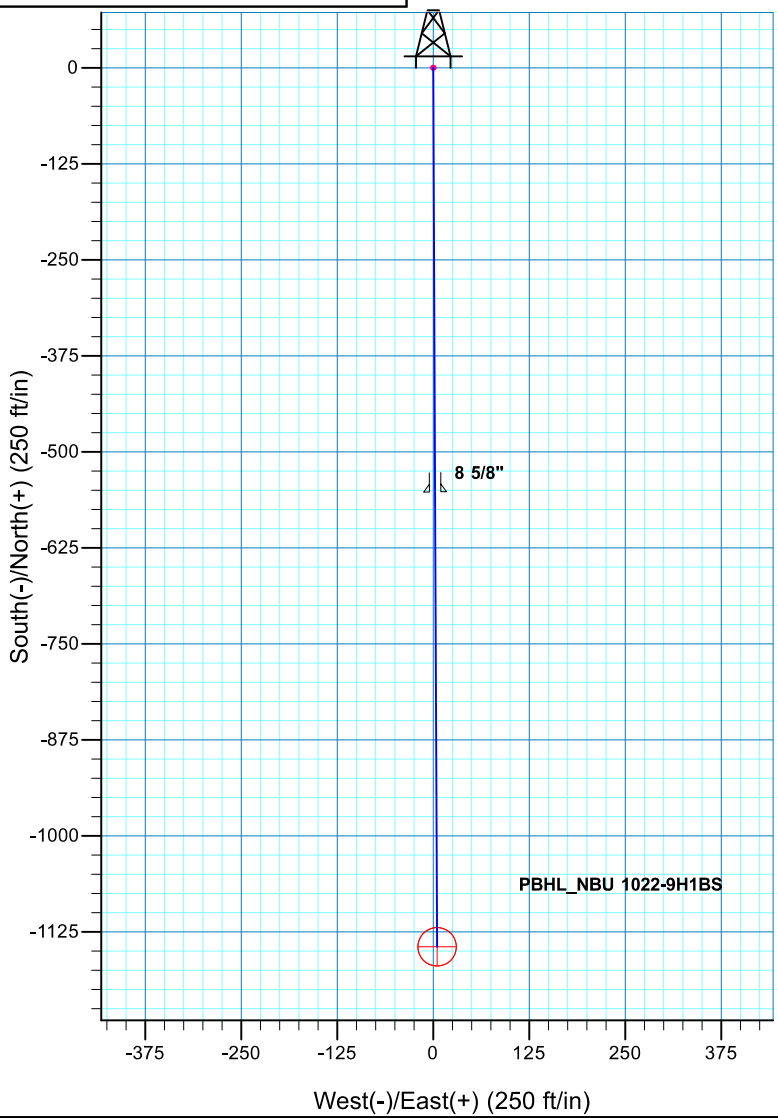
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8772.00	-1144.36	5.04	14517724.87	2078527.76	39.9666060	-109.4364390	Circle (Radius: 25.00)
- plan hits target center								

T M

Azimuths to True North
Magnetic North: 10.80°

Magnetic Field
Strength: 51981.8snT
Dip Angle: 65.78°
Date: 1/3/2014
Model: BGGM2013





SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1300.00	20.00	179.75	1279.82	-172.77	0.76	2.00	179.75	172.77	
3635.63	20.00	179.75	3474.59	-971.59	4.28	0.00	0.00	971.60	
4635.63	0.00	0.00	4454.40	-1144.36	5.04	2.00	180.00	1144.37	
8953.22	0.00	0.00	8772.00	-1144.36	5.04	0.00	0.00	1144.37	PBHL_NBU 1022-9H1BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1075.00	1084.78	GREEN RIVER
1417.00	1445.99	BIRDSNEST
1872.00	1930.19	MAHOGANY
4233.00	4414.00	WASATCH
6616.00	6797.22	MESAVERDE
8772.00	8953.22	SEGO

Plan: PLAN #1 PRELIMINARY (NBU 1022-9H1BS/OH)
Created By: Robert Scott Date: 12:02, January 06 2014

RECEIVED: July 01, 2014

API Well Number: 43047545570000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9A PAD
Well: NBU 1022-9H1CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.72°

Magnetic Field
Strength: 52066.1snT
Dip Angle: 65.79°
Date: 1/3/2014
Model: IGRF2010

WELL DETAILS: NBU 1022-9H1CS

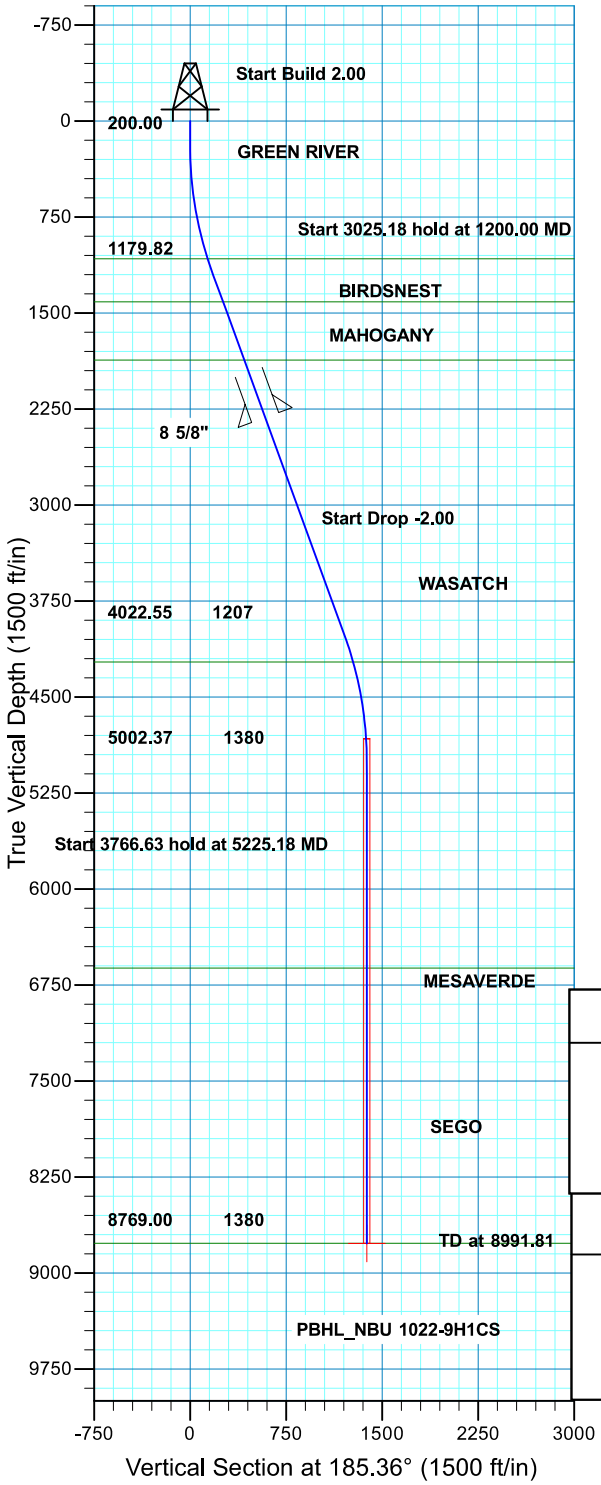
GL 5137 & KB 4 @ 5141.00ft (ASSUMED)

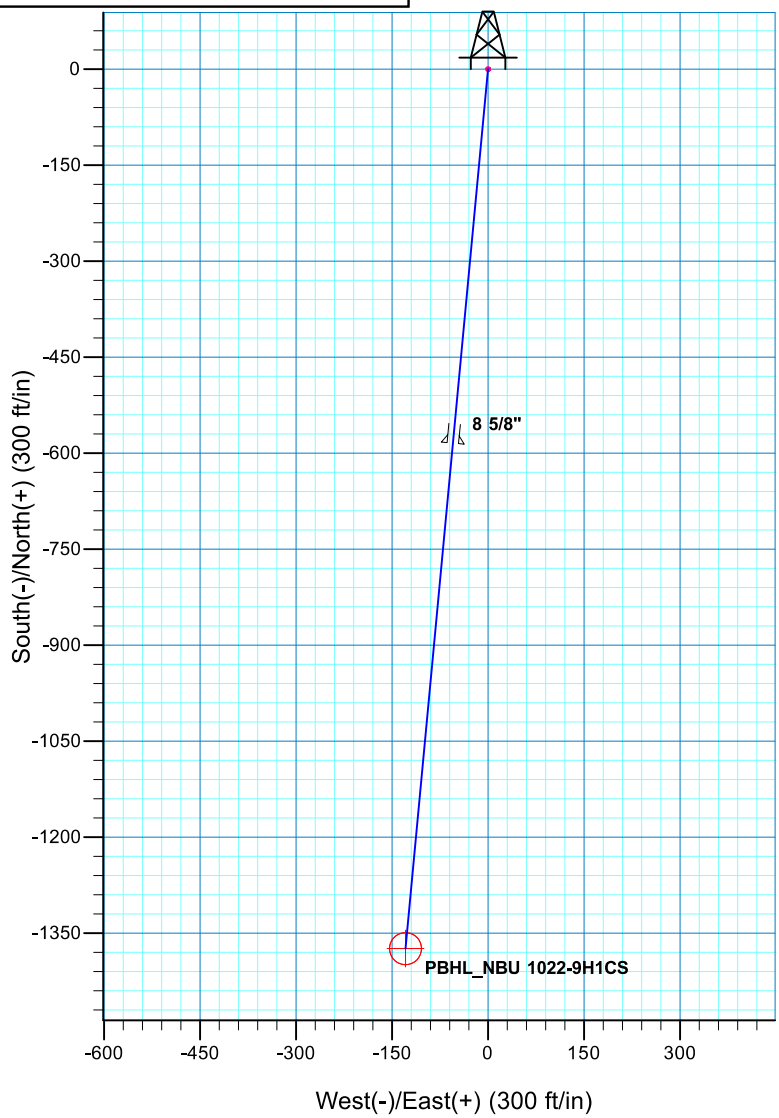
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14518854.16	2078489.18	39.9697080	-109.4365060

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8769.00	-1374.17	-128.92	14517477.94	2078384.37	39.9659350	-109.4369660	Circle (Radius: 25.00)

- plan hits target center





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
1200.00	20.00	185.36	1179.82	-172.01	-16.14	2.00	185.36	172.77	
4225.18	20.00	185.36	4022.55	-1202.16	-112.78	0.00	0.00	1207.44	
5225.18	0.00	0.00	5002.37	-1374.17	-128.92	2.00	180.00	1380.21	
8991.81	0.00	0.00	8769.00	-1374.17	-128.92	0.00	0.00	1380.21	PBHL_NBU 1022-9H1CS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	
1077.00	1091.31	GREEN RIVER	
1413.00	1448.15	BIRDSNEST	
1868.00	1932.35	MAHOGANY	
4228.00	4441.06	WASATCH	
6618.00	6840.81	MESAVERDE	
8768.99	8991.80	SEGO	0.00

Plan: PLAN #1 PRELIMINARY (NBU 1022-9H1CS/OH)
Created By: Robert Scott Date: 12:05, January 06 2014

RECEIVED: July 01, 2014

API Well Number: 43047545570000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9A PAD
Well: NBU 1022-9B4BS
Wellbore: OH
Design: PLAN #1 PRELIMINRAY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.80°

Magnetic Field
Strength: 51981.7snT
Dip Angle: 65.78°
Date: 1/3/2014
Model: BGGM2013

WELL DETAILS: NBU 1022-9B4BS

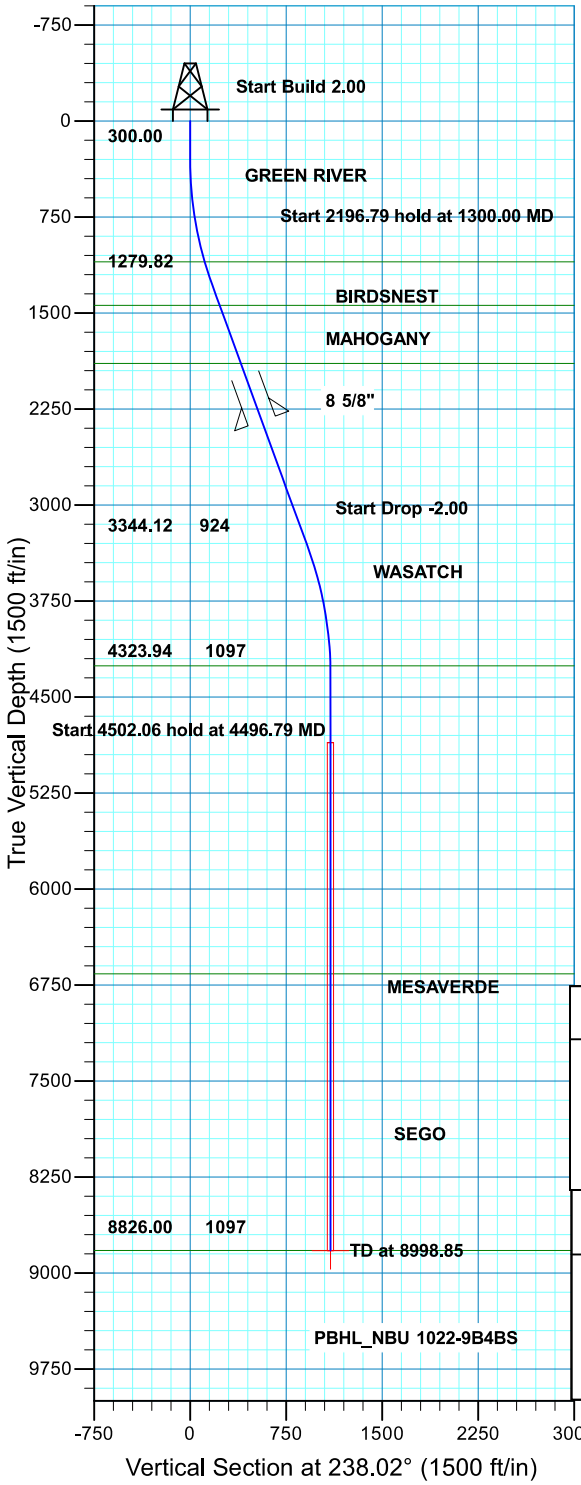
GL 5137 & KB 4 @ 5141.00ft (ASSUMED)

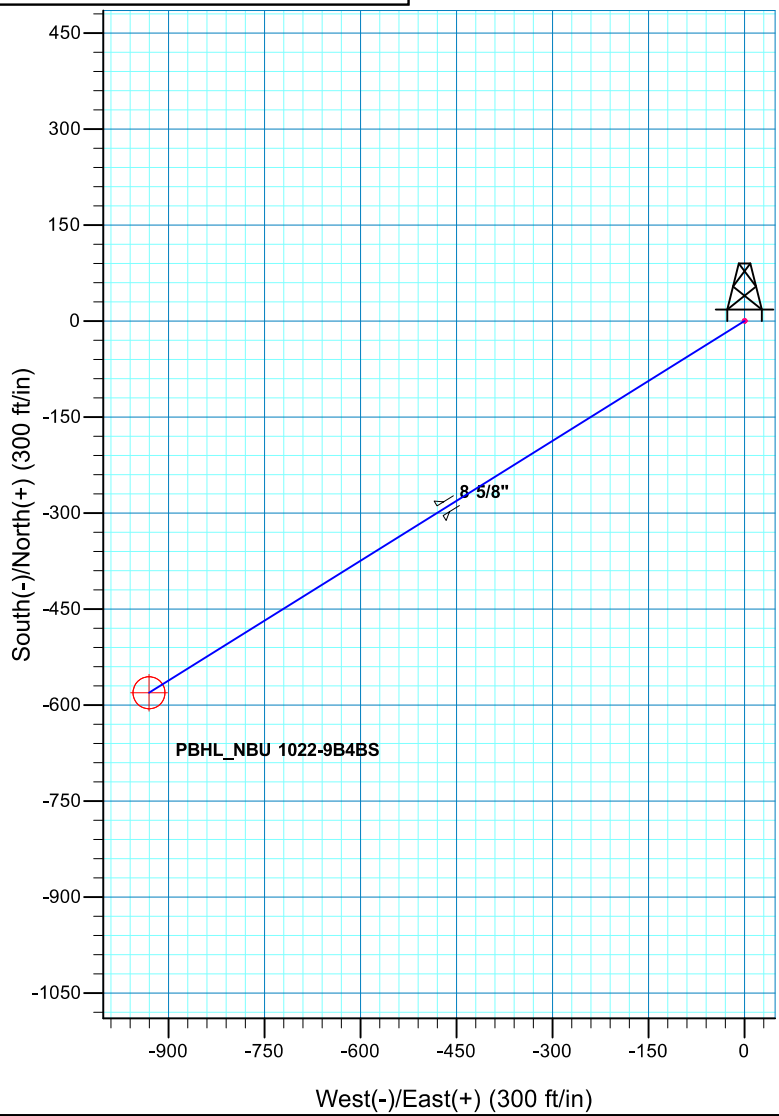
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14518847.11	2078482.30	39.9696890	-109.4365310

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8826.00	-580.90	-930.43	14518249.99	2077562.19	39.9680940	-109.4398510	Circle (Radius: 25.00)

- plan hits target center





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00
1300.00	20.00	238.02	1279.82	-91.50	-146.55	2.00	238.02	172.77
3496.79	20.00	238.02	3344.12	-489.40	-783.88	0.00	0.00	924.11
4496.79	0.00	0.00	4323.94	-580.90	-930.43	2.00	180.00	1096.88
8998.85	0.00	0.00	8826.00	-580.90	-930.43	0.00	0.00	1096.88

PBHL_NBU 1022-9B4BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

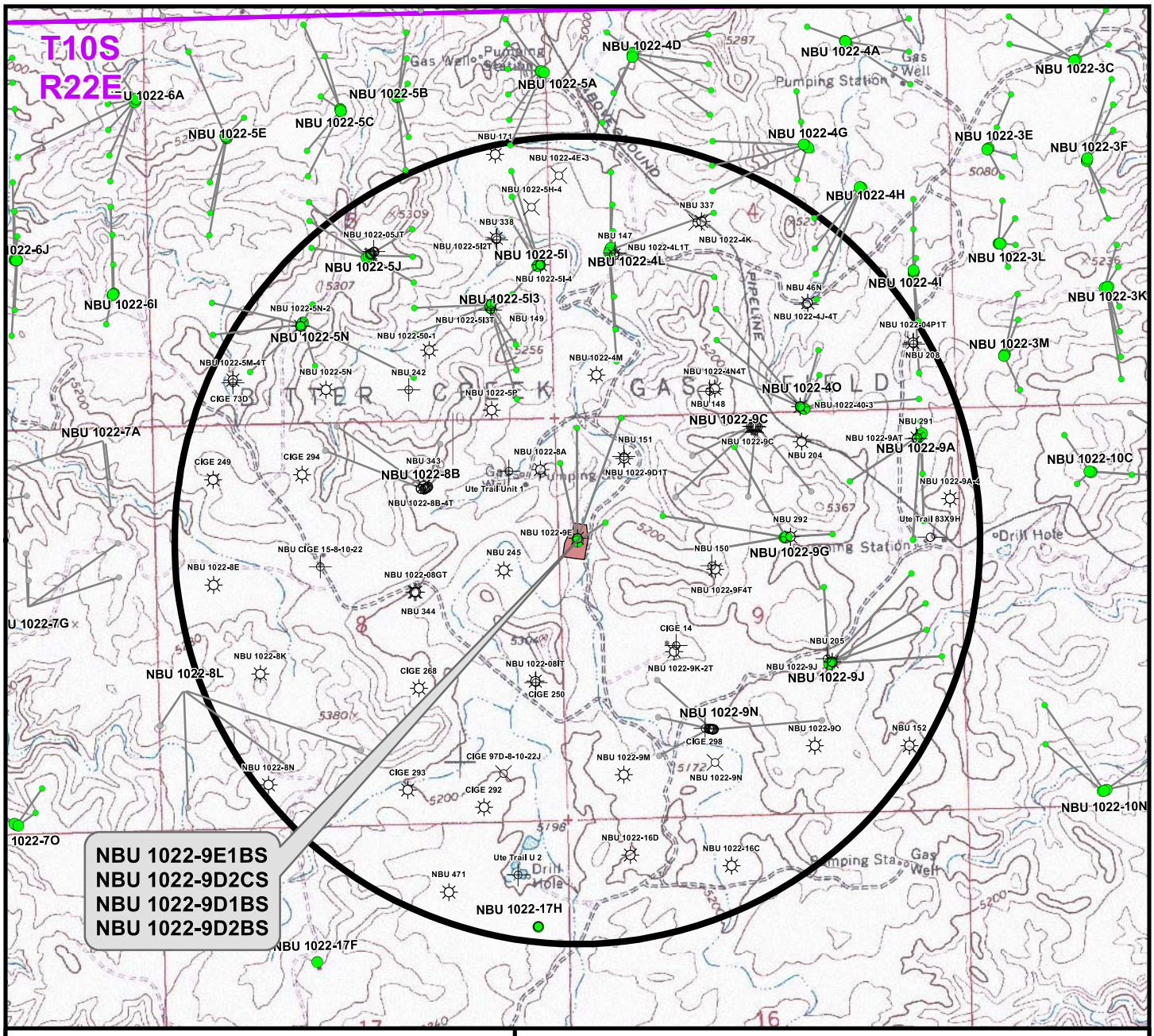
FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1102.00	1112.86	GREEN RIVER
1441.00	1471.53	BIRDSNEST
1895.00	1954.67	MAHOGANY
4257.00	4429.85	WASATCH
6664.00	6836.85	MESAVERDE
8825.99	8998.84	SEGO

Plan: PLAN #1 PRELIMINRAY (NBU 1022-9B4BS/OH)
Created By: Robert Scott Date: 12:01, January 06 2014

RECEIVED: July 01, 2014

API Well Number: 43047545570000



Well locations derived from Utah Division of Oil, Gas and Mining (UDOGM) (oilgas.ogm.utah.gov). The estimated distances from proposed bore locations to the nearest existing bore locations are based on UDOGM data.

Proposed Well	Nearest Well Bore	Footage
NBU 1022-9E1BS	NBU 1022-9E	±419ft
NBU 1022-9D2CS	NBU 1022-8A	±273ft
NBU 1022-9D1BS	NBU 151	±505ft
NBU 1022-9D2BS	NBU 151	±720ft

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Well - 1 Mile Radius
- Producing
- Spudded
- APD Approved
- Preliminary Location
- Deferred
- Cancelled
- Temporarily Abandoned
- Active Injector
- Location Abandoned
- Plugged & Abandoned
- Shut-In

WELL PAD - NBU 1022-9E

TOPO C
NBU 1022-9E1BS, NBU 1022-9D2CS
NBU 1022-9D1BS & NBU 1022-9D2BS
LOCATED IN SECTION 9, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 12
DRAWN: TL	DATE: 18 Nov 2013	12 OF 16
REVISED:	DATE:	

K:\ANADARKO\2013\2013_55_NBU_1022-9_FOCUS\GIS\Maps_ABCDE\NBU 1022-9E\NBU 1022-9E_C.mxd11/21/2013 11:30:06 PM

API Well Number: 43047545570000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9E PAD
Well: NBU 1022-9E1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

WELL DETAILS: NBU 1022-9E1BS

GL 5115 & KB 4 @ 5119.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14517481.66	2073981.63	39.9661560	-109.4526730

DESIGN TARGET DETAILS

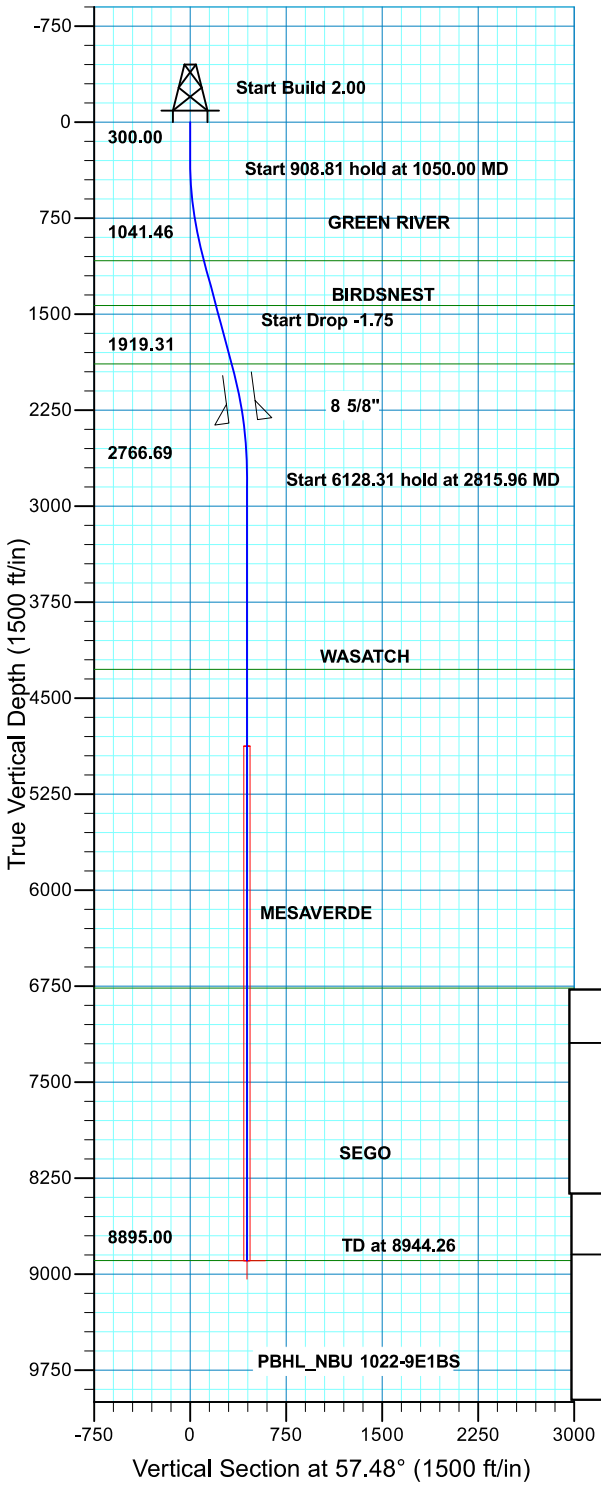
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8895.00	238.92	374.70	14517727.05	2074352.12	39.9668120	-109.4513360	Circle (Radius: 25.00)

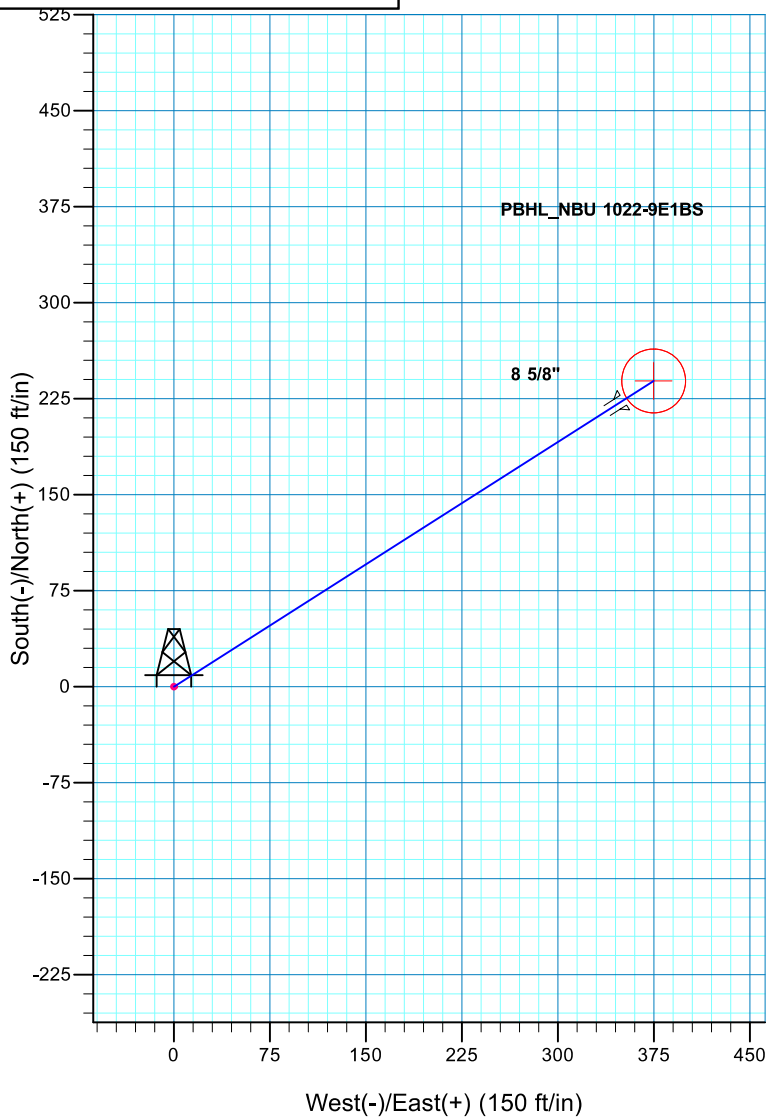
- plan hits target center

T M

Azimuths to True North
Magnetic North: 10.81°

Magnetic Field
Strength: 51977.7snT
Dip Angle: 65.77°
Date: 1/3/2014
Model: BGGM2013





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1050.00	15.00	57.48	1041.46	52.48	82.31	2.00	57.48	97.62	
1958.81	15.00	57.48	1919.31	178.95	280.64	0.00	0.00	332.83	
2815.96	0.00	0.00	2766.69	238.92	374.70	1.75	180.00	444.39	
8944.26	0.00	0.00	8895.00	238.92	374.70	0.00	0.00	444.39	PBHL_NBU 1022-9E1BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S 22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	
1083.00	1093.00	GREEN RIVER	
1433.00	1455.35	BIRDSNEST	
1889.00	1927.44	MAHOGANY	
4276.00	4325.26	WASATCH	
6765.00	6814.26	MESAVERDE	
8894.99	8944.25	SEGO	0.00

Plan: PLAN #1 PRELIMINARY (NBU 1022-9E1BS/OH)
Created By: Robert Scott Date: 12:19, January 06 2014

RECEIVED: July 02, 2014

API Well Number: 43047545570000

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9E PAD
Well: NBU 1022-9D2CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Scientific Drilling

Anadarko Petroleum Corporation

WELL DETAILS: NBU 1022-9D2CS

GL 5115 & KB 4 @ 5119.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude
0.00	0.00	14517491.52	2073983.14	39.9661830	-109.4526670

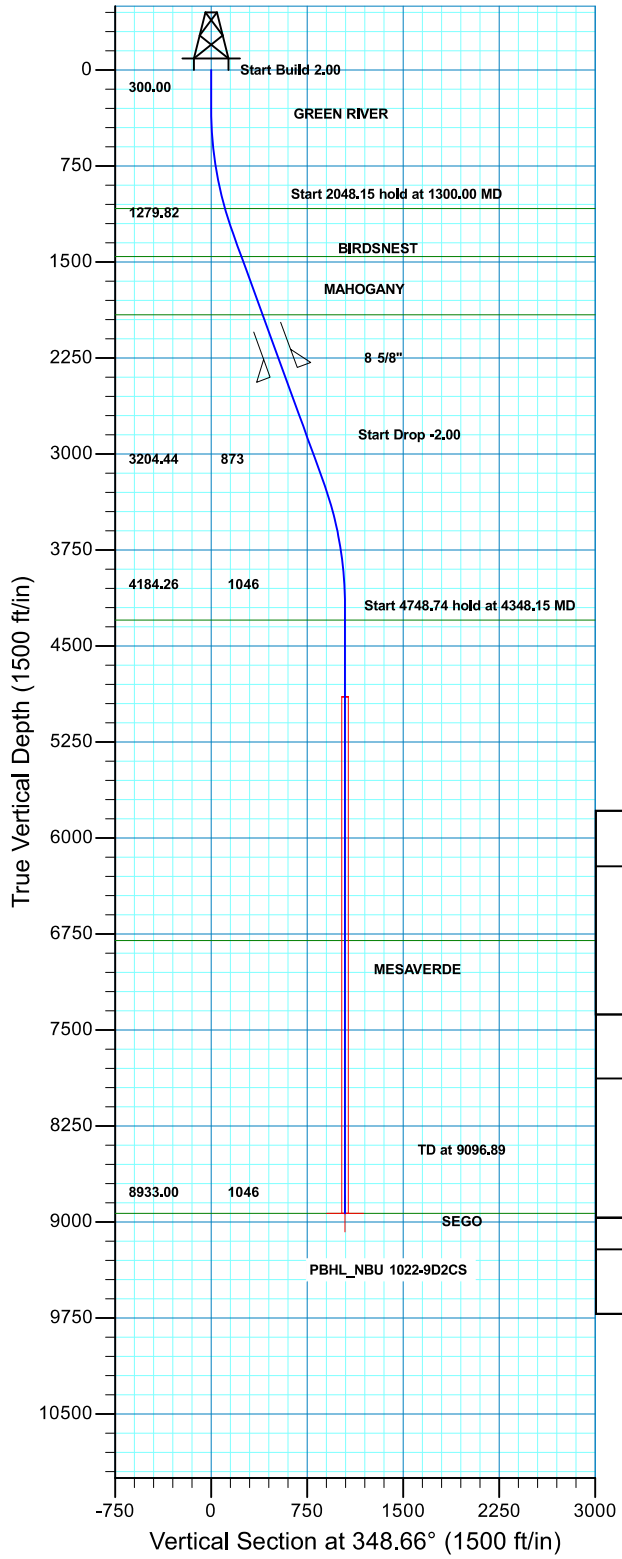
DESIGN TARGET DETAILS

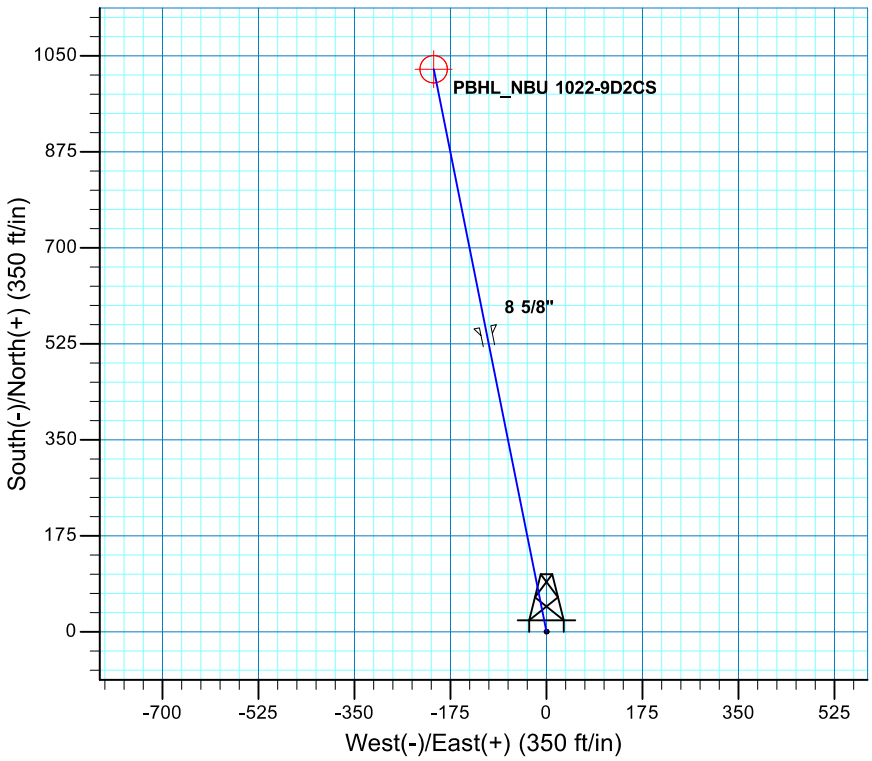
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8933.00	1025.62	-205.70	14518513.41	2073759.67	39.9689990	-109.4534010	Circle (Radius: 25.00)

- plan hits target center

T
Azimuths to True North
Magnetic North: 10.81°

Magnetic Field
Strength: 51977.7snT
Dip Angle: 65.77°
Date: 2014/01/03
Model: BGGM2013





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1300.00	20.00	348.66	1279.82	169.39	-33.97	2.00	348.66	172.77	
3348.15	20.00	348.66	3204.44	856.22	-171.73	0.00	0.00	873.28	
4348.15	0.00	0.00	4184.26	1025.62	-205.70	2.00	180.00	1046.04	
9096.89	0.00	0.00	8933.00	1025.62	-205.70	0.00	0.00	1046.04	PBHL_NBU 1022-9D2CS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S 22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1081.00	1091.01	GREEN RIVER
1457.00	1488.56	BIRDSNEST
1913.00	1973.82	MAHOGANY
4298.00	4461.89	WASATCH
6801.00	6964.89	MESAVERDE
8932.99	9096.88	SEGO

CASING DETAILS

TVD	MD	Name	Size
2363.00	2452.70	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 1022-9D2CS/OH)
Created By: RobertScott Date: 14:50, January 17 2014

Received: July 02, 2014

API Well Number: 43047545570000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9E PAD
Well: NBU 1022-9D2BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.81°

Magnetic Field
Strength: 51977.7snT
Dip Angle: 65.77°
Date: 1/3/2014
Model: BGGM2013

WELL DETAILS: NBU 1022-9D2BS

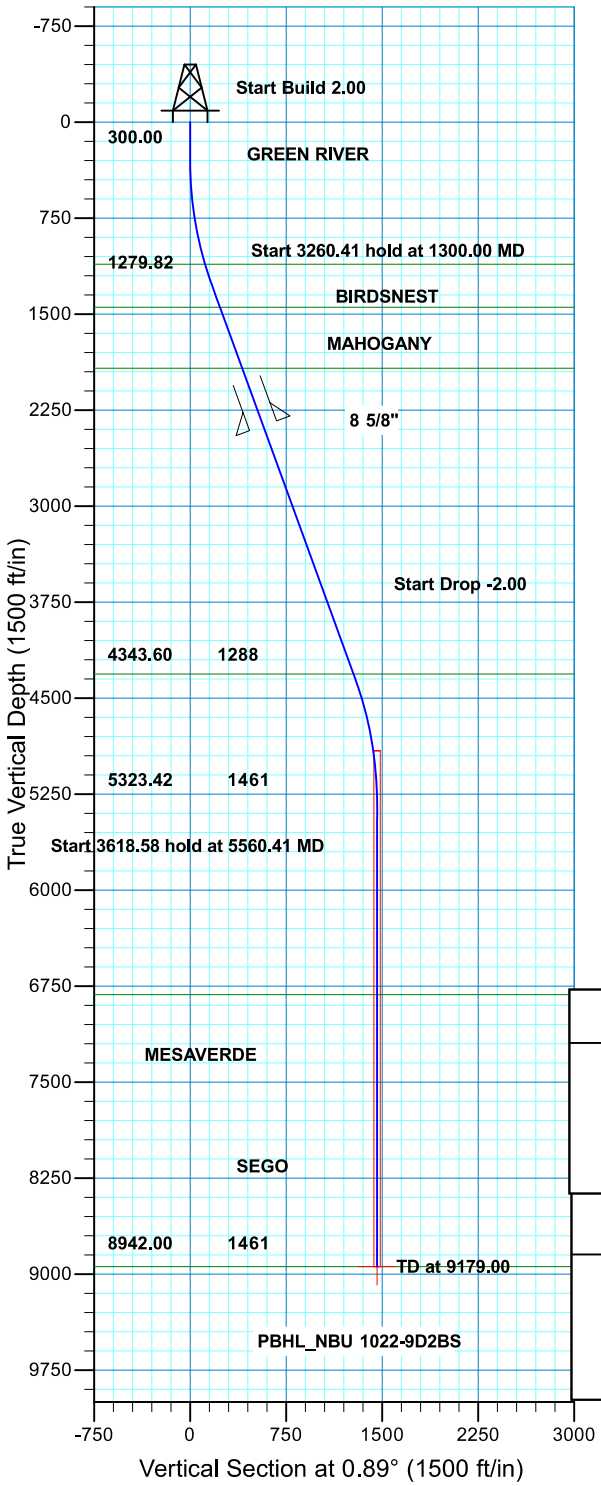
GL 5115 & KB 4 @ 5119.00ft (ASSUMED)

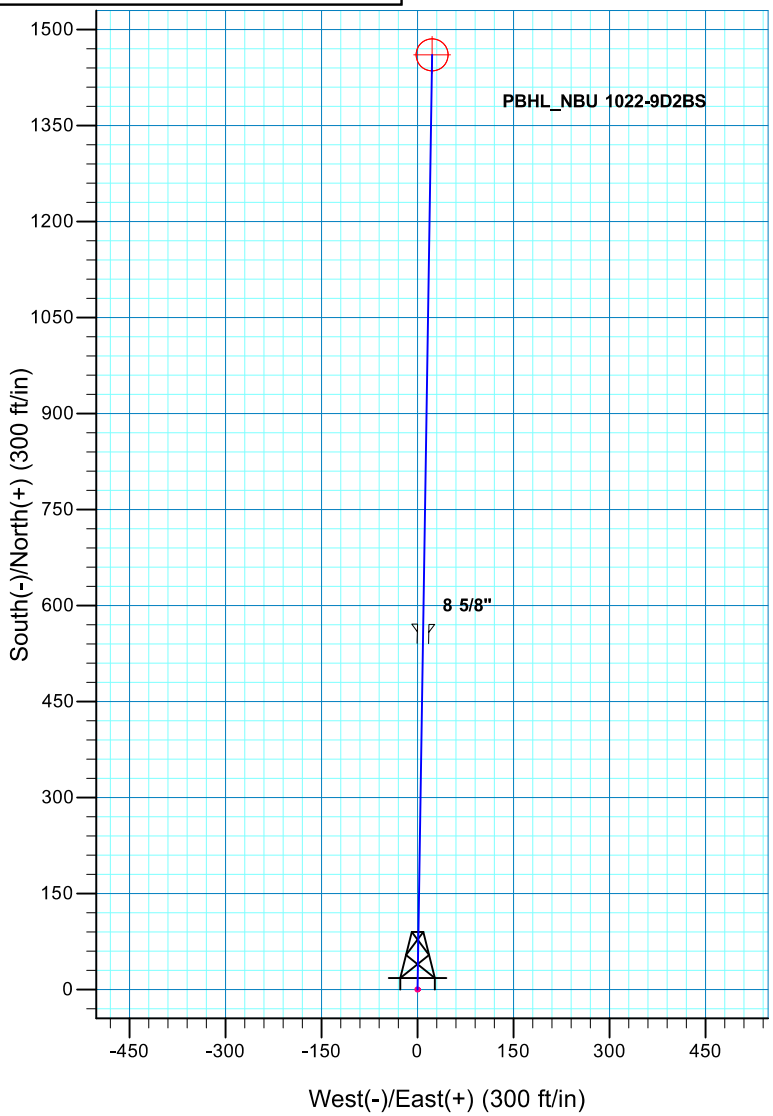
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14517511.24	2073986.16	39.9662370	-109.4526550

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8942.00	1460.49	22.70	14518971.90	2073983.52	39.9702470	-109.4525740	Circle (Radius: 25.00)

- plan hits target center





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1300.00	20.00	0.89	1279.82	172.75	2.68	2.00	0.89	172.77	
4560.41	20.00	0.89	4343.60	1287.74	20.01	0.00	0.00	1287.89	
5560.41	0.00	0.00	5323.42	1460.49	22.70	2.00	180.00	1460.66	
9179.00	0.00	0.00	8942.00	1460.49	22.70	0.00	0.00	1460.66	PBHL_NBU 1022-9D2BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S 22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	
1110.00	1121.20	GREEN RIVER	
1446.00	1476.85	BIRDSNEST	
1923.00	1984.46	MAHOGANY	
4312.00	4526.78	WASATCH	
6816.00	7053.00	MESAVERDE	
8941.99	9178.99	SEGO	0.00

Plan: PLAN #1 PRELIMINARY (NBU 1022-9D2BS/OH)
Created By: Robert Scott Date: 12:15, January 06 2014

RECEIVED: July 02, 2014

API Well Number: 43047545570000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9E PAD
Well: NBU 1022-9D1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

WELL DETAILS: NBU 1022-9D1BS

GL 5115 & KB 4 @ 5119.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14517501.38	2073984.65	39.9662100	-109.4526610

DESIGN TARGET DETAILS

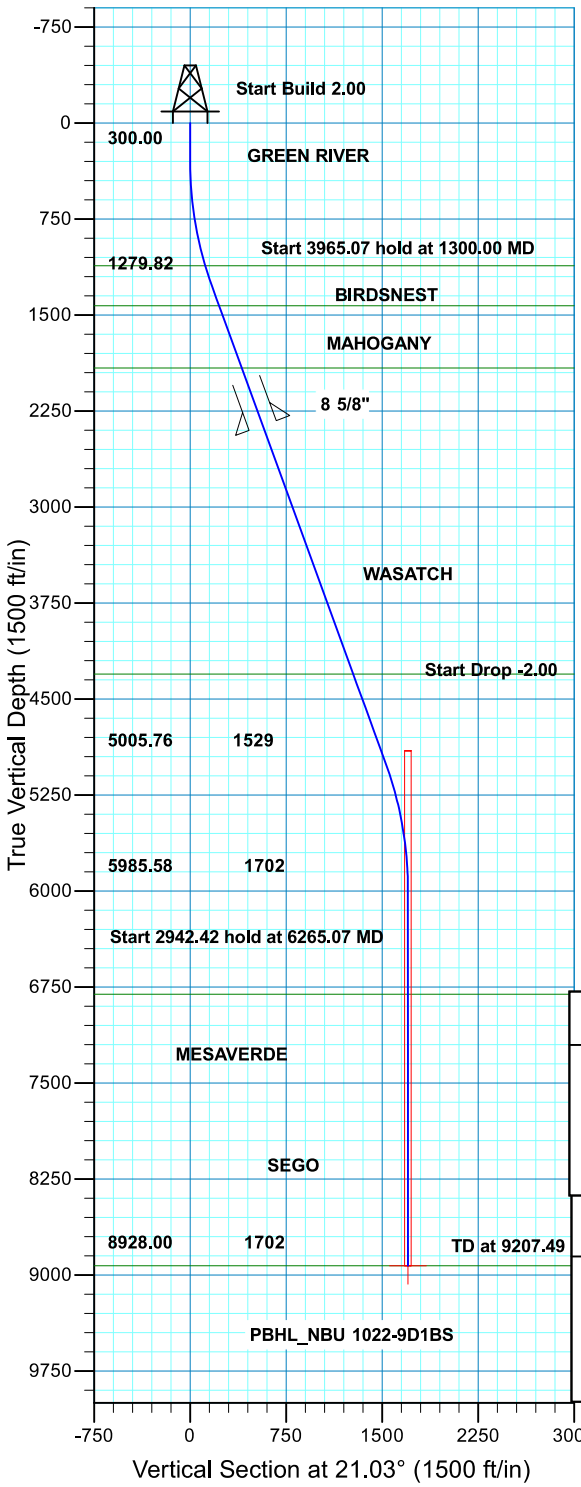
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8928.00	1588.33	610.64	14519100.07	2074567.64	39.9705710	-109.4504820	Circle (Radius: 25.00)

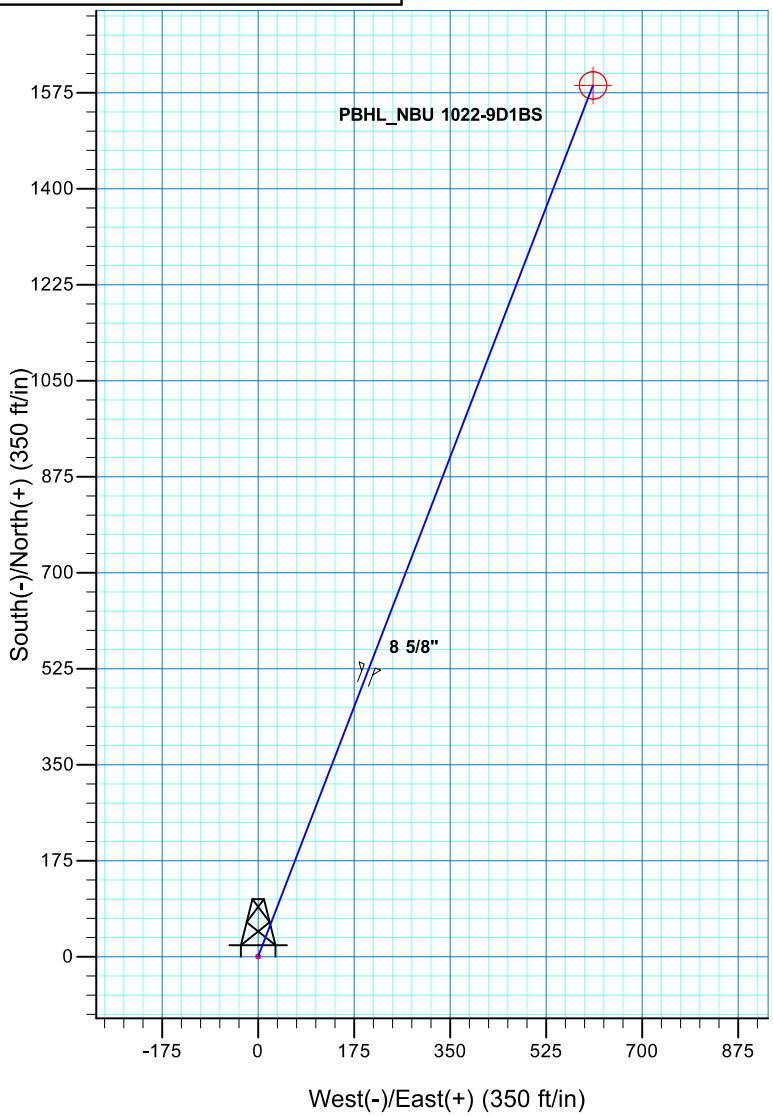
- plan hits target center

T M

Azimuths to True North
Magnetic North: 10.81°

Magnetic Field
Strength: 51977.7snT
Dip Angle: 65.77°
Date: 1/3/2014
Model: BGGM2013





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00
1300.00	20.00	21.03	1279.82	161.26	62.00	2.00	21.03	172.77
5265.07	20.00	21.03	5005.76	1427.07	548.64	0.00	0.00	1528.90
6265.07	0.00	0.00	5985.58	1588.33	610.64	2.00	180.00	1701.67
9207.49	0.00	0.00	8928.00	1588.33	610.64	0.00	0.00	1701.67

PBHL_NBU 1022-9D1BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S 22E
System Datum: Mean Sea Level

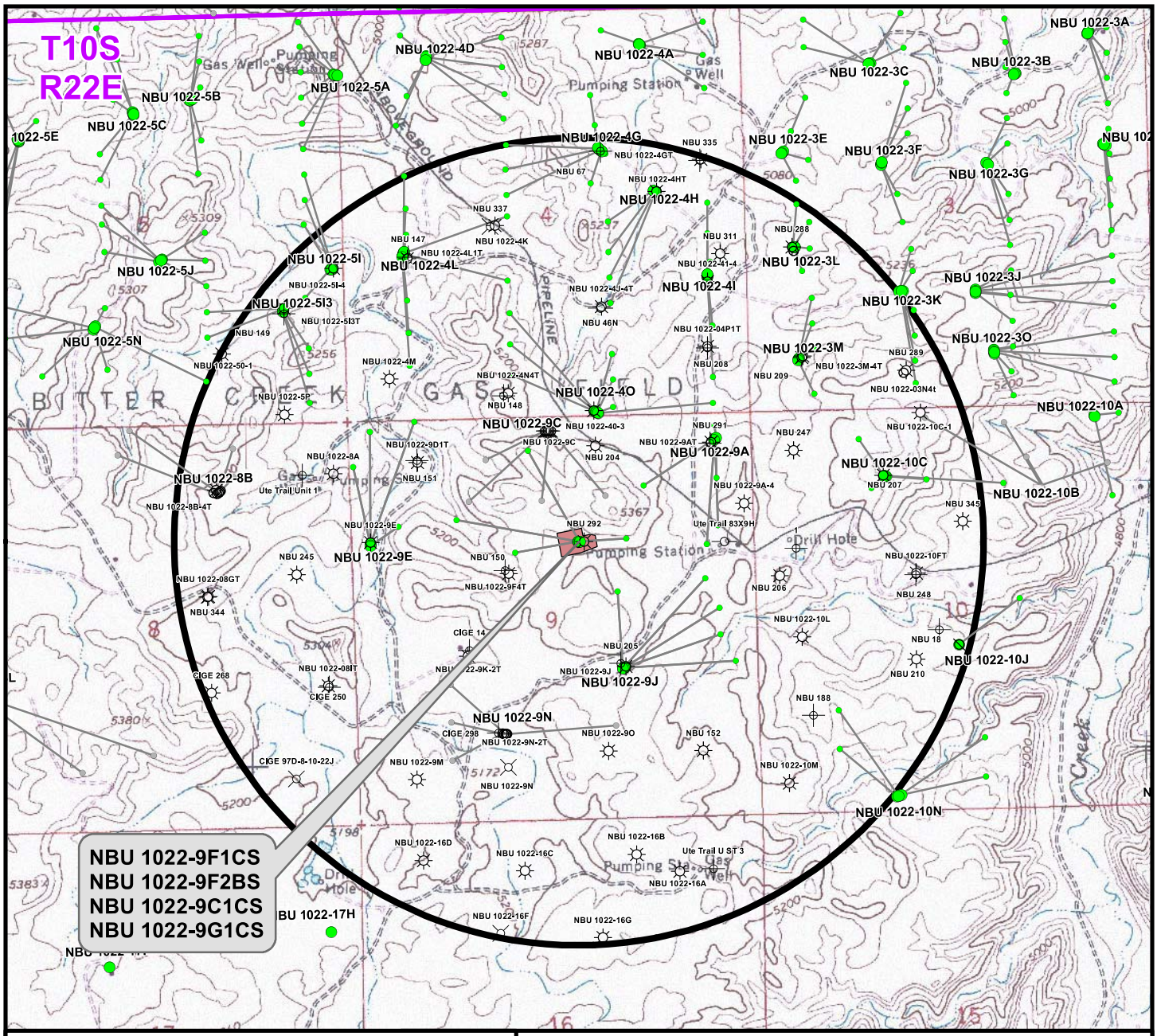
FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1117.00	1128.50	GREEN RIVER
1429.00	1458.76	BIRDSNEST
1915.00	1975.95	MAHOGANY
4306.00	4520.40	WASATCH
6807.00	7086.49	MESAVERDE
8928.00	9207.49	SEGO

Plan: PLAN #1 PRELIMINARY (NBU 1022-9D1BS/OH)
Created By: Robert Scott Date: 12:15, January 06 2014

RECEIVED: July 01, 2014

API Well Number: 43047545570000



Well locations derived from Utah Division of Oil, Gas and Mining (UDOGM) (oilgas.ogm.utah.gov). The estimated distances from proposed bore locations to the nearest existing bore locations are based on UDOGM data.

Proposed Well	Nearest Well Bore	Footage
NBU 1022-9F1CS	NBU 150	±268ft
NBU 1022-9F2BS	NBU 1022-9C3CS BH	±291ft
NBU 1022-9C1CS	NBU 1022-9C	±365ft
NBU 1022-9G1CS	NBU 292	±558ft

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Well - 1 Mile Radius
- Producing
- Spudded
- APD Approved
- Preliminary Location
- Deferred
- Cancelled
- Temporarily Abandoned
- Active Injector
- Location Abandoned
- Plugged & Abandoned
- Shut-In

WELL PAD - NBU 1022-9G

TOPO C
NBU 1022-9F1CS, NBU 1022-9F2BS, NBU 1022-9C1CS & NBU 1022-9G1CS
LOCATED IN SECTION 9, T10S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 12
DRAWN: TL	DATE: 18 Nov 2013	12 OF 16
REVISED:	DATE:	

K:\ANADARKO\2013\2013_55_NBU_1022-9_FOCUS\GIS\Maps_ABCDE\NBU 1022-9G\NBU 1022-9G_C.mxd11/22/2013 2:00:40 PM

API Well Number: 43047545570000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9G PAD
Well: NBU 1022-9F1CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

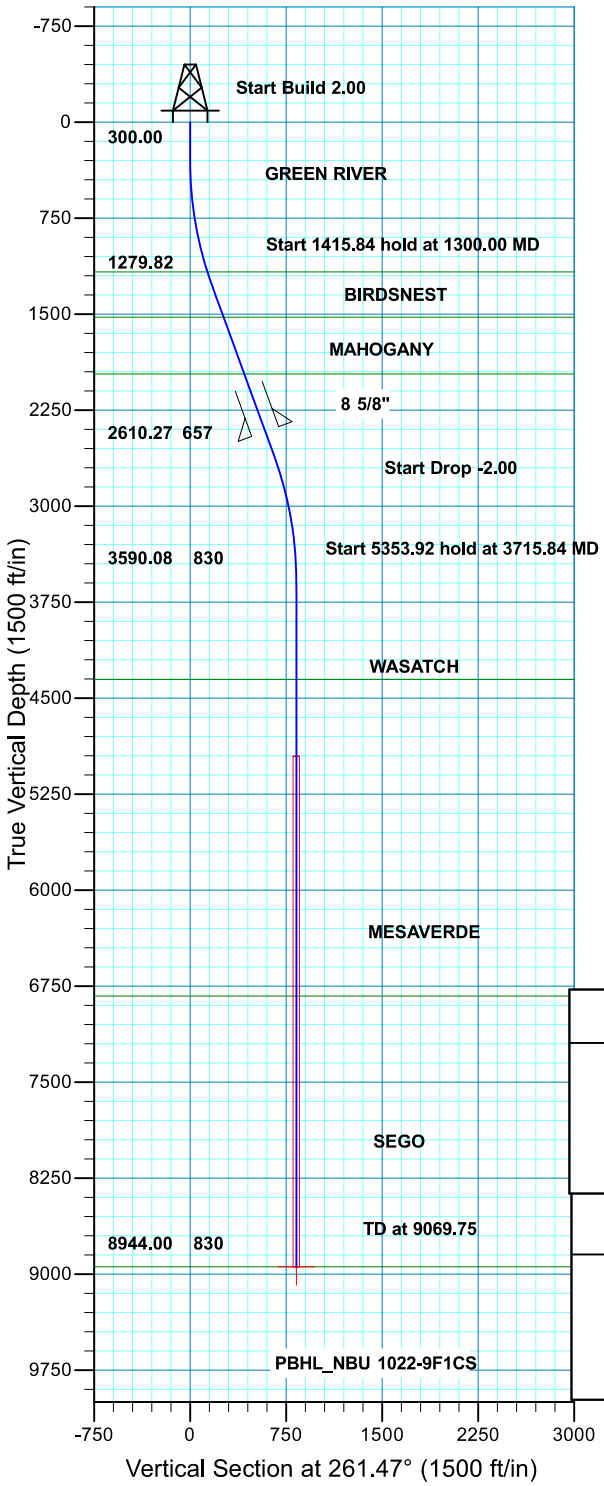
WELL DETAILS: NBU 1022-9F1CS					
GL 5228 & KB 4 @ 5232.00ft (ASSUMED)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14517520.87	2076694.81	39.9661340	-109.4429910

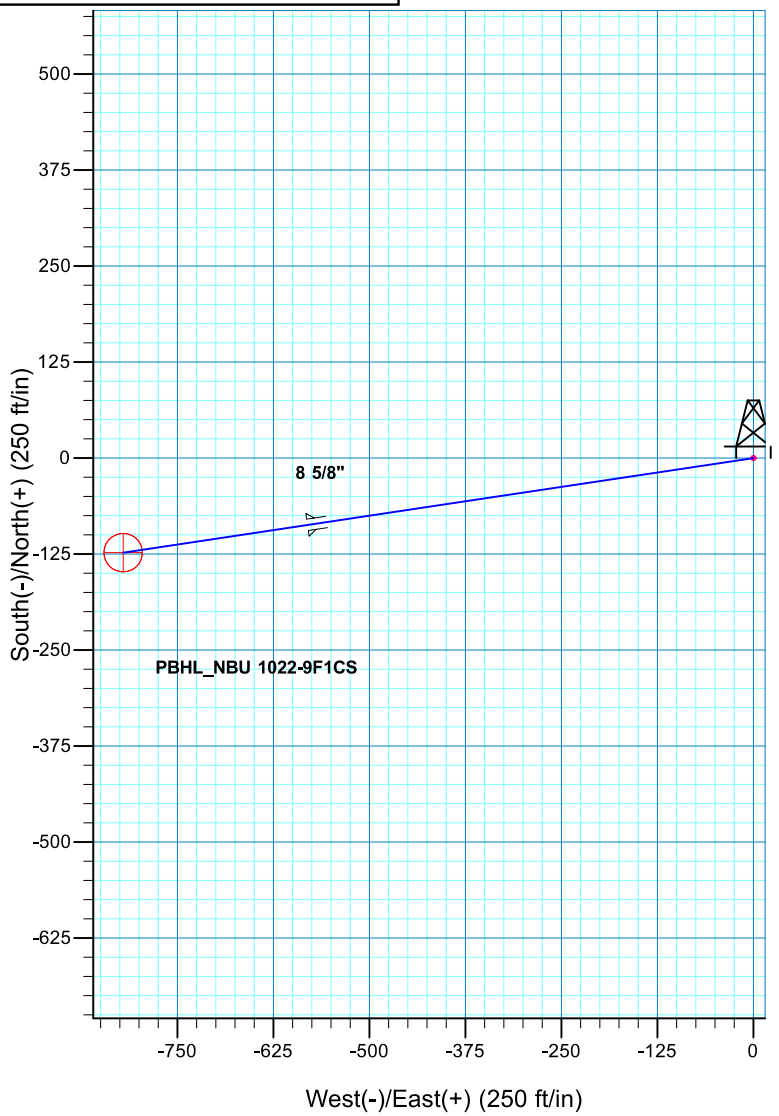
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL - plan hits target center	8944.00	-123.09	-820.60	14517383.47	2075876.48	39.9657960	-109.4459190	Circle (Radius: 25.00)

T M

Azimuths to True North
Magnetic North: 10.80°

Magnetic Field
Strength: 51978.2snT
Dip Angle: 65.77°
Date: 1/3/2014
Model: BGGM2013





SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1300.00	20.00	261.47	1279.82	-25.63	-170.86	2.00	261.47	172.77	
2715.84	20.00	261.47	2610.27	-97.46	-649.74	0.00	0.00	657.01	
3715.84	0.00	0.00	3590.08	-123.09	-820.60	2.00	180.00	829.78	
9069.75	0.00	0.00	8944.00	-123.09	-820.60	0.00	0.00	829.78	PBHL_NBU 1022-9F1CS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1171.00	1185.01	GREEN RIVER
1524.00	1559.86	BIRDSNEST
1968.00	2032.35	MAHOGANY
4355.00	4480.75	WASATCH
6829.00	6954.75	MESAVERDE
8944.00	9069.75	SEGO

Plan: PLAN #1 PRELIMINARY (NBU 1022-9F1CS/OH)
Created By: Robert Scott Date: 12:29 Thursday Jan 16 2014

RECEIVED: July 02, 2014

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
440 West 200 South, Suite 500
Salt Lake City, UT 84101

IN REPLY REFER TO:
3160
(UT-922)

July 7, 2014

Memorandum

To: Assistant Field Office Manager Minerals,
Vernal Field Office

From: Michael Coulthard, Petroleum Engineer

Subject: 2014 Plan of Development Natural Buttes Unit
Uintah County, Utah.

Pursuant to email between Diana Mason, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2014 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
NBU 1022-9A PAD		
43-047-54546	NBU 1022-9A1BS	Sec 09 T10S R22E 0383 FNL 0489 FEL BHL Sec 09 T10S R22E 0226 FNL 0503 FEL
43-047-54551	NBU 1022-9H1BS	Sec 09 T10S R22E 0397 FNL 0503 FEL BHL Sec 09 T10S R22E 1535 FNL 0492 FEL
43-047-54552	NBU 1022-9H1CS	Sec 09 T10S R22E 0405 FNL 0510 FEL BHL Sec 09 T10S R22E 1778 FNL 0640 FEL
43-047-54557	NBU 1022-9B4BS	Sec 09 T10S R22E 0412 FNL 0517 FEL BHL Sec 09 T10S R22E 0984 FNL 1448 FEL
NBU 1022-9E PAD		
43-047-54553	NBU 1022-9E1BS	Sec 09 T10S R22E 1683 FNL 0245 FWL BHL Sec 09 T10S R22E 1443 FNL 0621 FWL
43-047-54554	NBU 1022-9D2CS	Sec 09 T10S R22E 1673 FNL 0247 FWL BHL Sec 09 T10S R22E 0647 FNL 0044 FWL
43-047-54555	NBU 1022-9D2BS	Sec 09 T10S R22E 1653 FNL 0251 FWL BHL Sec 09 T10S R22E 0192 FNL 0277 FWL
43-047-54556	NBU 1022-9D1BS	Sec 09 T10S R22E 1663 FNL 0249 FWL BHL Sec 09 T10S R22E 0073 FNL 0864 FWL

RECEIVED: July 09, 2014

API #	WELL NAME	LOCATION

(Proposed PZ WASATCH-MESA VERDE)

NBU 1022-9G PAD

43-047-54558 NBU 1022-9F1CS Sec 09 T10S R22E 1690 FNL 2329 FEL
BHL Sec 09 T10S R22E 1811 FNL 2139 FWL

This office has no objection to permitting the wells at this time.

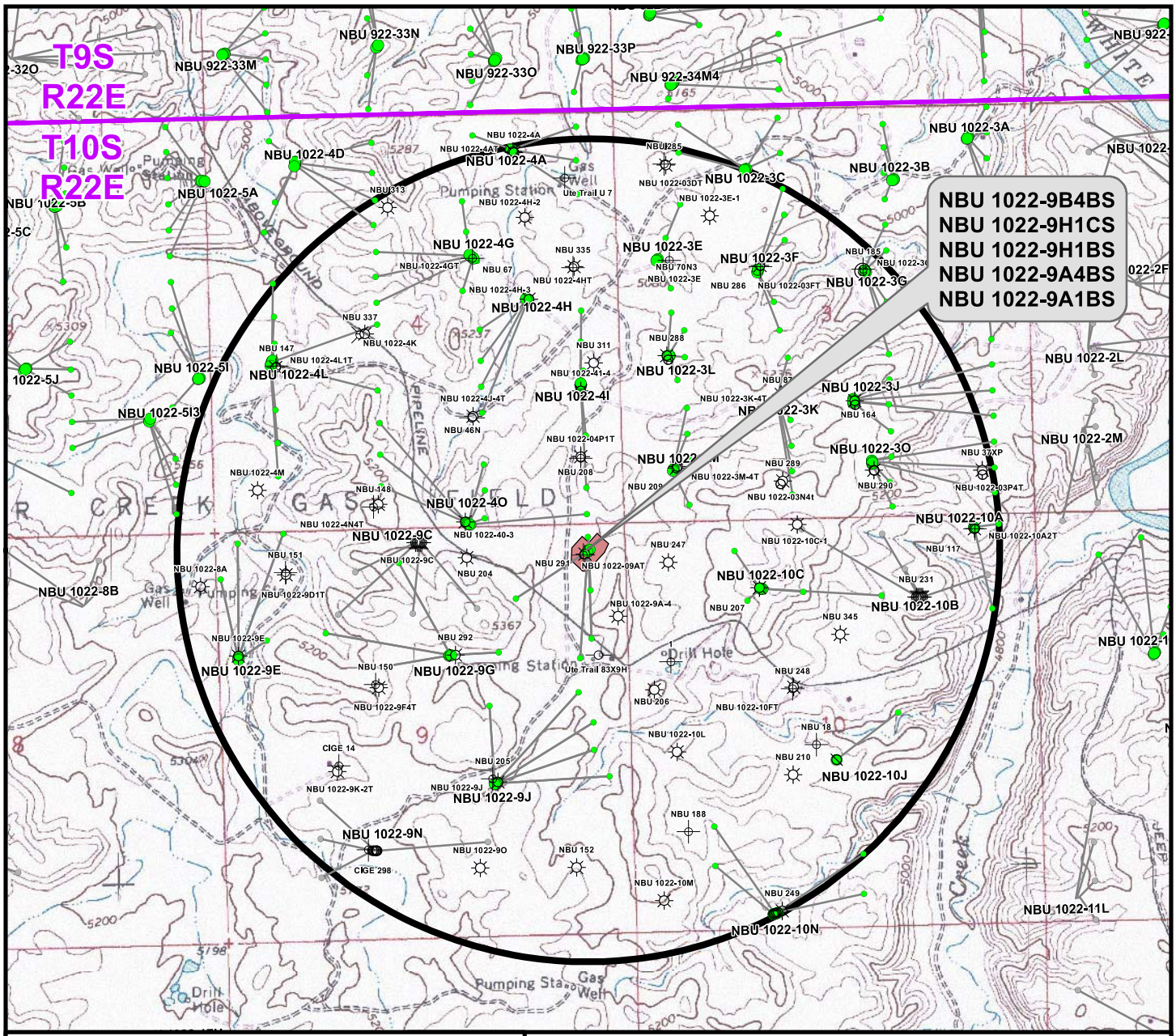
Michael Coulthard

Digitally signed by Michael Coulthard
DN: cn=Michael Coulthard, o=Bureau of Land Management, ou=Division of Minerals, email=mcoultha@blm.gov, c=US
Date: 2014.07.07 09:41:49 -06'00'

bcc: File - Natural Buttes Unit
Division of Oil Gas and Mining
Central Files
Agr. Sec. Chron
Fluid Chron

MCoulthard:mc:7-7-14

RECEIVED: July 09, 2014



Well locations derived from Utah Division of Oil, Gas and Mining (UDOGM) (oilgas.ogm.utah.gov). The estimated distances from proposed bore locations to the nearest existing bore locations are based on UDOGM data.

Proposed Well	Nearest Well Bore	Footage
NBU 1022-9B4BS	NBU 1022-9B4CS BH	±522ft
NBU 1022-9H1CS	Ute Trail 83X9H	±231ft
NBU 1022-9H1BS	Ute Trail 83X9H	±224ft
NBU 1022-9A4BS	NBU 291	±462ft
NBU 1022-9A1BS	NBU 1022-09AT	±227ft

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Well - 1 Mile Radius
- Producing
- Spudded
- APD Approved
- Preliminary Location
- Deferred
- Cancelled
- Temporarily Abandoned
- Active Injector
- Location Abandoned
- Plugged & Abandoned
- Shut-In

WELL PAD - NBU 1022-9A

TOPO C
NBU 1022-9B4BS,
NBU 1022-9H1CS, NBU 1022-9H1BS
NBU 1022-9A4BS & NBU 1022-9A1BS
LOCATED IN SECTION 9, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 13
DRAWN: TL	DATE: 18 Nov 2013	13 OF 17
REVISED:	DATE:	

K:\ANADARKO\2013\2013_55_NBU_1022-9_FOCUS\GIS\Maps_ABCDE\NBU 1022-9A\NBU 1022-9A_C.mxd 11/22/2013 10:59:50 AM

API Well Number: 43047545570000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9A PAD
Well: NBU 1022-9A1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.80°

Magnetic Field
Strength: 51981.8snT
Dip Angle: 65.78°
Date: 1/3/2014
Model: BGGM2013

WELL DETAILS: NBU 1022-9A1BS

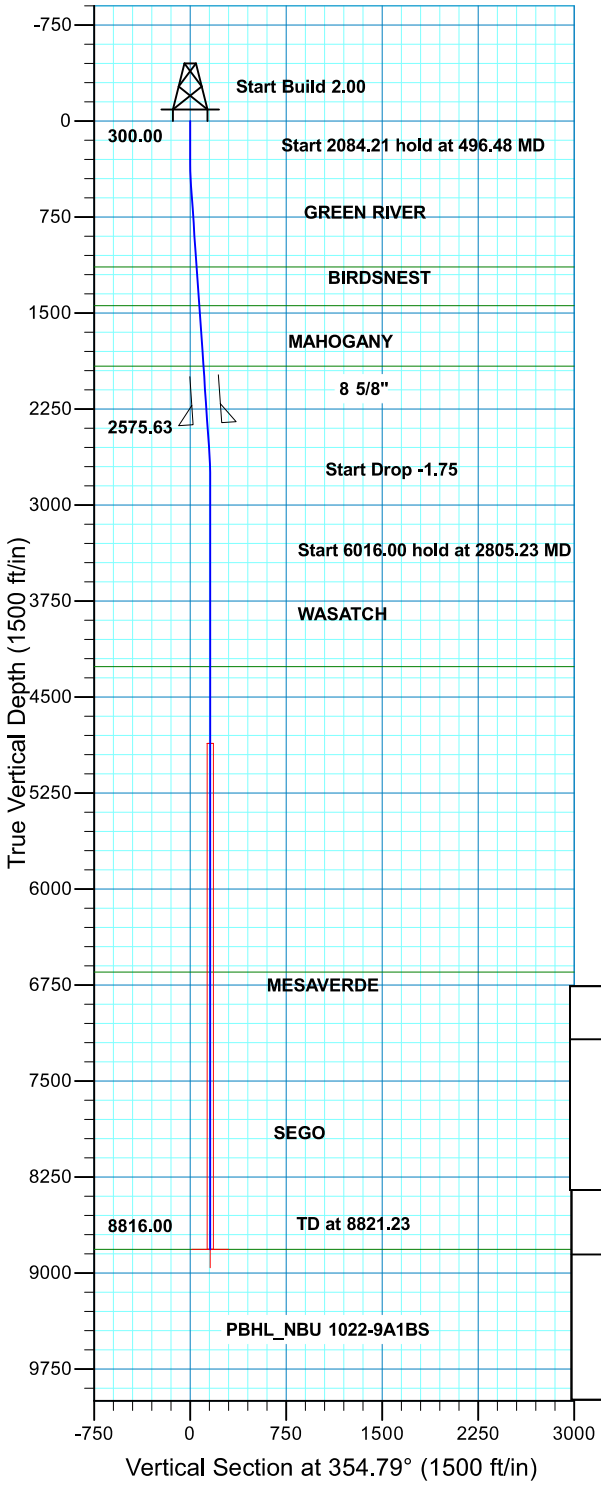
GL 5137 & KB 4 @ 5141.00ft (ASSUMED)

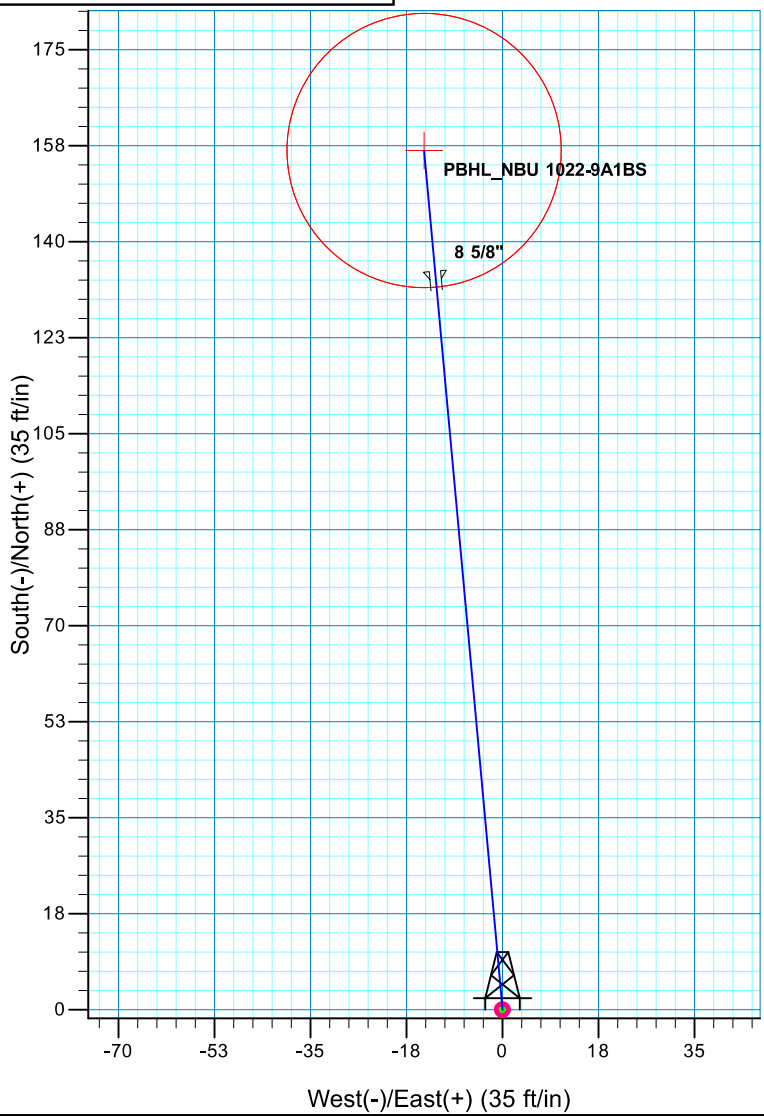
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14518876.37	2078509.53	39.9697680	-109.4364320

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8816.00	156.61	-14.29	14519032.71	2078492.50	39.9701980	-109.4364830	Circle (Radius: 25.00)

- plan hits target center





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
496.48	3.93	354.79	496.32	6.71	-0.61	2.00	354.79	6.73	
2580.68	3.93	354.79	2575.63	148.95	-13.59	0.00	0.00	149.57	
2805.23	0.00	0.00	2800.00	156.61	-14.29	1.75	180.00	157.26	
8821.23	0.00	0.00	8816.00	156.61	-14.29	0.00	0.00	157.26	PBHL_NBU 1022-9A1BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1141.00	1142.67	GREEN RIVER
1443.00	1445.38	BIRDSNEST
1916.00	1919.50	MAHOGANY
4263.00	4268.23	WASATCH
6650.00	6655.23	MESAVERDE
8816.00	8821.23	SEGO

Plan: PLAN #1 PRELIMINARY (NBU 1022-9A1BS/OH)
Created By: Robert Scott Date: 11:59, January 06 2014

RECEIVED: July 01, 2014

API Well Number: 43047545570000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9A PAD
Well: NBU 1022-9H1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

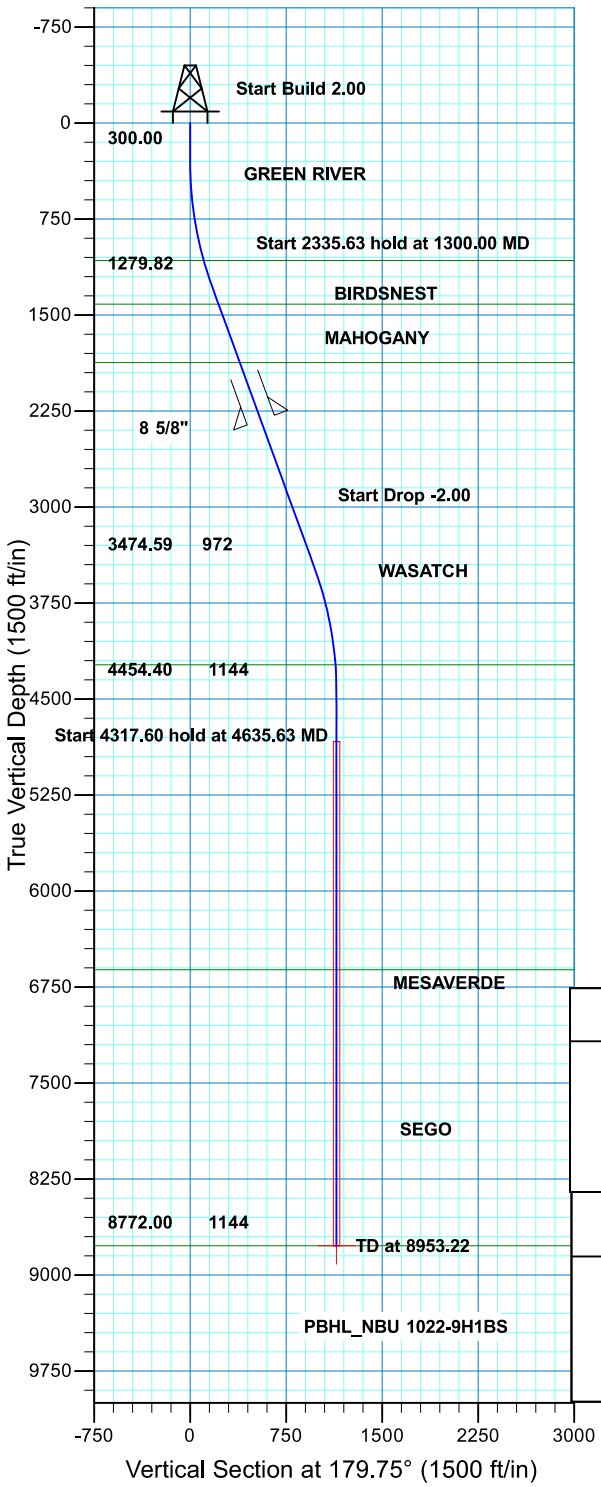
WELL DETAILS: NBU 1022-9H1BS					
GL 5137 & KB 4 @ 5141.00ft (ASSUMED)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14518868.96	2078502.65	39.9697480	-109.4364570

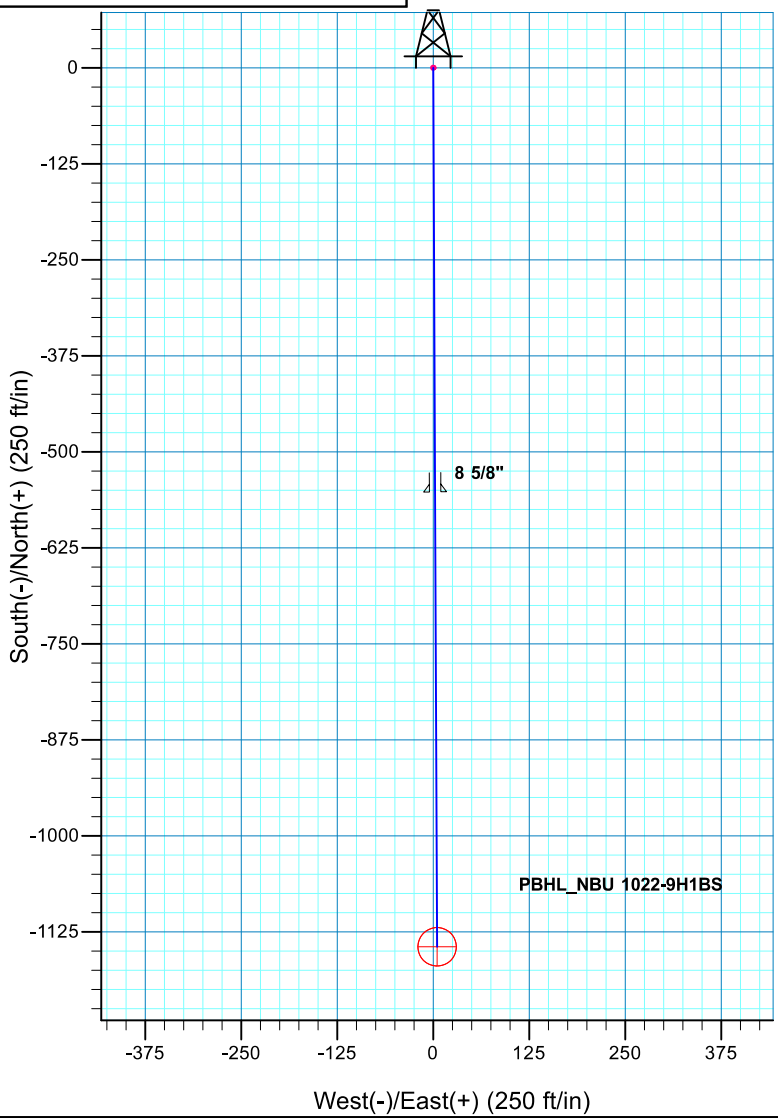
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8772.00	-1144.36	5.04	14517724.87	2078527.76	39.9666060	-109.4364390	Circle (Radius: 25.00)
- plan hits target center								

T M

Azimuths to True North
Magnetic North: 10.80°

Magnetic Field
Strength: 51981.8snT
Dip Angle: 65.78°
Date: 1/3/2014
Model: BGGM2013





SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1300.00	20.00	179.75	1279.82	-172.77	0.76	2.00	179.75	172.77	
3635.63	20.00	179.75	3474.59	-971.59	4.28	0.00	0.00	971.60	
4635.63	0.00	0.00	4454.40	-1144.36	5.04	2.00	180.00	1144.37	
8953.22	0.00	0.00	8772.00	-1144.36	5.04	0.00	0.00	1144.37	PBHL_NBU 1022-9H1BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1075.00	1084.78	GREEN RIVER
1417.00	1445.99	BIRDSNEST
1872.00	1930.19	MAHOGANY
4233.00	4414.00	WASATCH
6616.00	6797.22	MESAVERDE
8772.00	8953.22	SEGO

Plan: PLAN #1 PRELIMINARY (NBU 1022-9H1BS/OH)
Created By: Robert Scott Date: 12:02, January 06 2014

RECEIVED: July 01, 2014

API Well Number: 43047545570000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9A PAD
Well: NBU 1022-9H1CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.72°

Magnetic Field
Strength: 52066.1snT
Dip Angle: 65.79°
Date: 1/3/2014
Model: IGRF2010

WELL DETAILS: NBU 1022-9H1CS

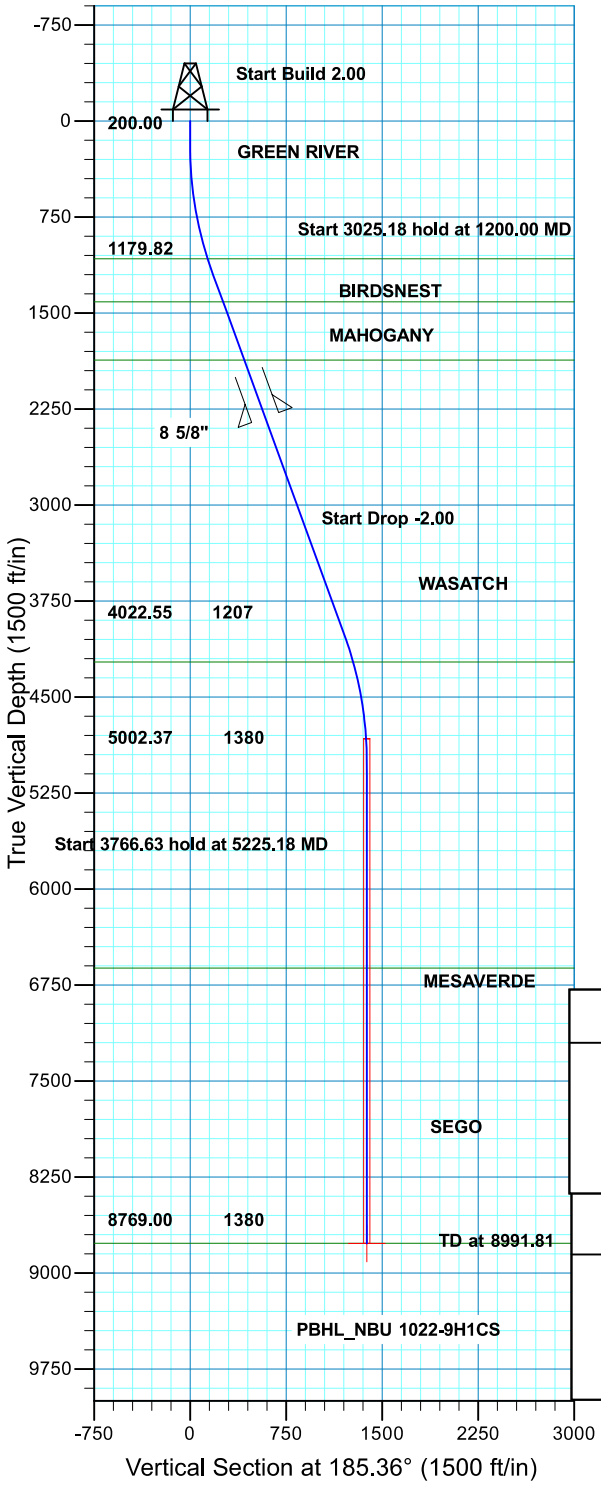
GL 5137 & KB 4 @ 5141.00ft (ASSUMED)

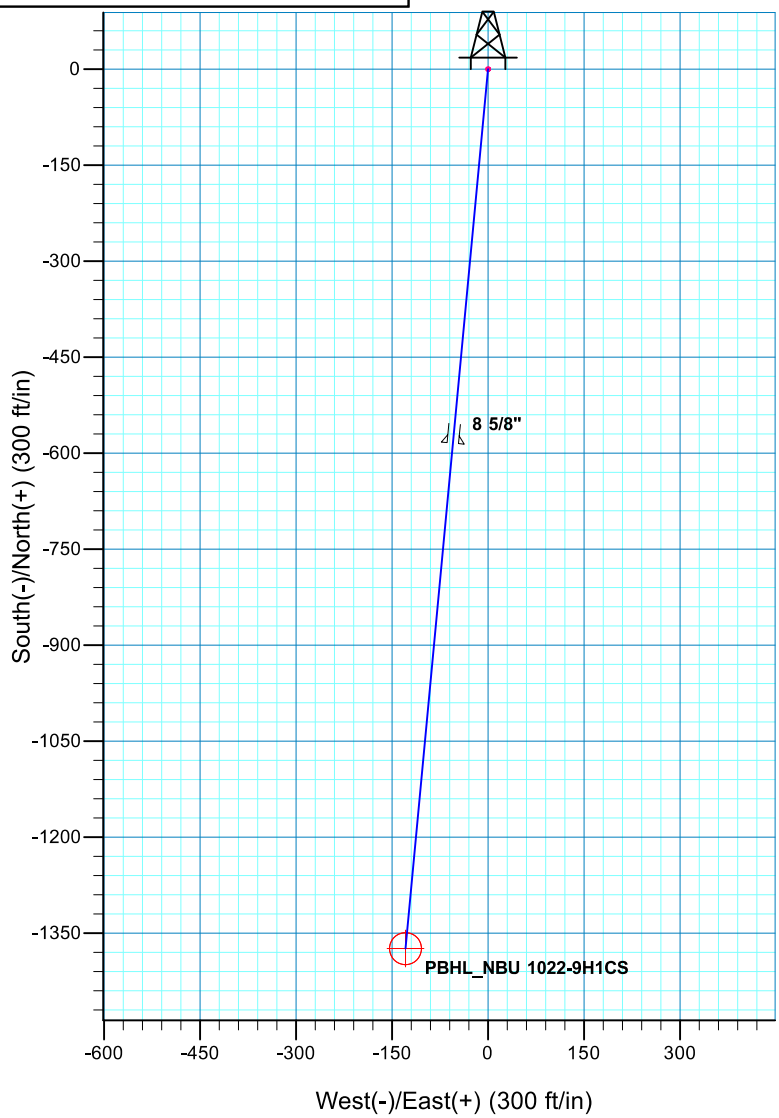
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14518854.16	2078489.18	39.9697080	-109.4365060

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8769.00	-1374.17	-128.92	14517477.94	2078384.37	39.9659350	-109.4369660	Circle (Radius: 25.00)

- plan hits target center





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
1200.00	20.00	185.36	1179.82	-172.01	-16.14	2.00	185.36	172.77	
4225.18	20.00	185.36	4022.55	-1202.16	-112.78	0.00	0.00	1207.44	
5225.18	0.00	0.00	5002.37	-1374.17	-128.92	2.00	180.00	1380.21	
8991.81	0.00	0.00	8769.00	-1374.17	-128.92	0.00	0.00	1380.21	PBHL_NBU 1022-9H1CS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	
1077.00	1091.31	GREEN RIVER	
1413.00	1448.15	BIRDSNEST	
1868.00	1932.35	MAHOGANY	
4228.00	4441.06	WASATCH	
6618.00	6840.81	MESAVERDE	
8768.99	8991.80	SEGO	0.00

Plan: PLAN #1 PRELIMINARY (NBU 1022-9H1CS/OH)
Created By: Robert Scott Date: 12:05, January 06 2014

RECEIVED: July 01, 2014

API Well Number: 43047545570000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9A PAD
Well: NBU 1022-9B4BS
Wellbore: OH
Design: PLAN #1 PRELIMINRAY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.80°

Magnetic Field
Strength: 51981.7snT
Dip Angle: 65.78°
Date: 1/3/2014
Model: BGGM2013

WELL DETAILS: NBU 1022-9B4BS

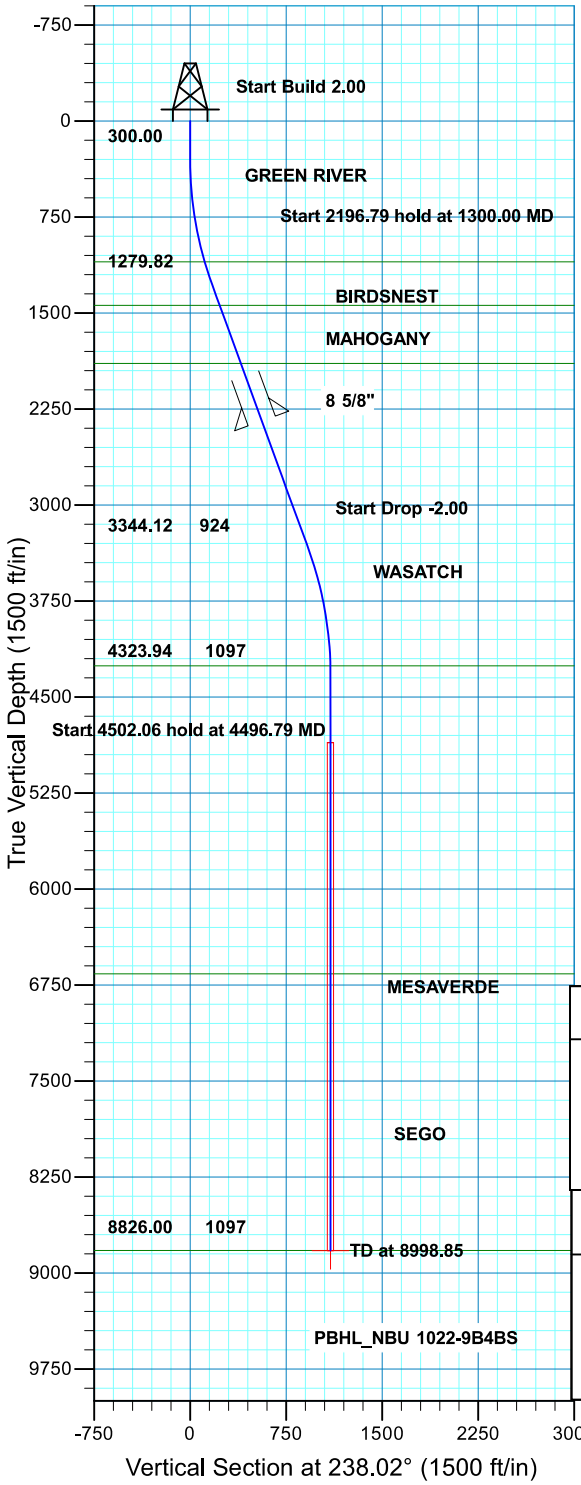
GL 5137 & KB 4 @ 5141.00ft (ASSUMED)

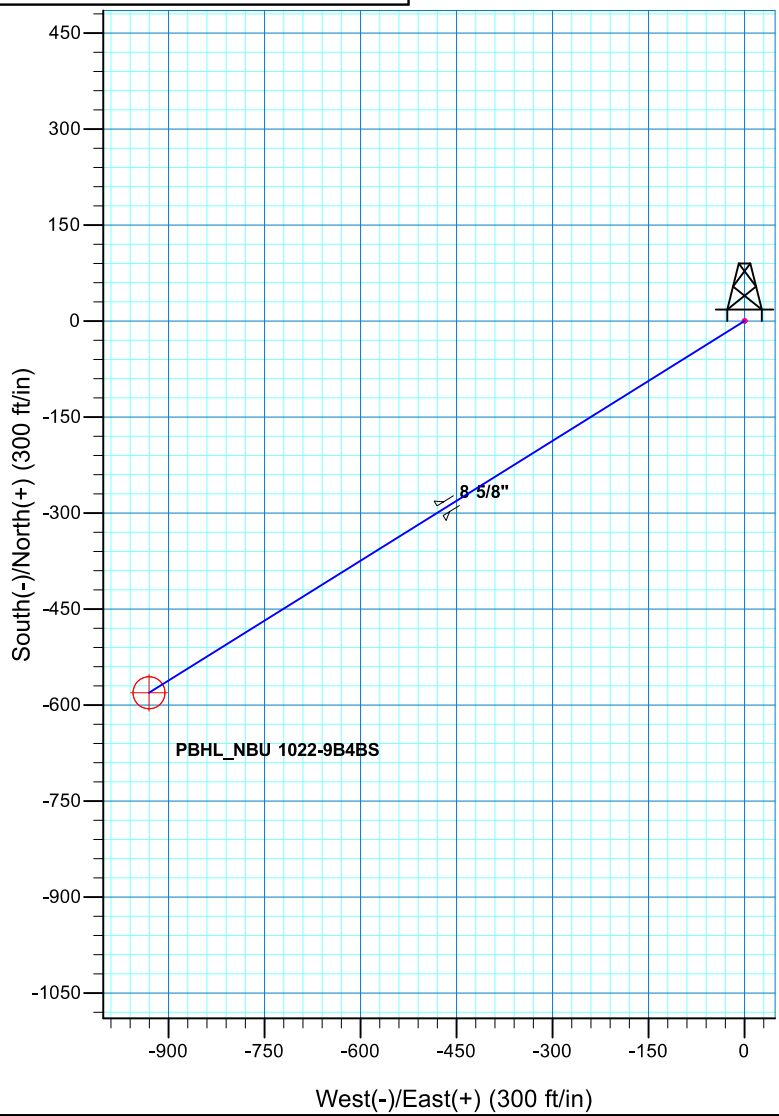
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14518847.11	2078482.30	39.9696890	-109.4365310

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8826.00	-580.90	-930.43	14518249.99	2077562.19	39.9680940	-109.4398510	Circle (Radius: 25.00)

- plan hits target center





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00
1300.00	20.00	238.02	1279.82	-91.50	-146.55	2.00	238.02	172.77
3496.79	20.00	238.02	3344.12	-489.40	-783.88	0.00	0.00	924.11
4496.79	0.00	0.00	4323.94	-580.90	-930.43	2.00	180.00	1096.88
8998.85	0.00	0.00	8826.00	-580.90	-930.43	0.00	0.00	1096.88

PBHL_NBU 1022-9B4BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

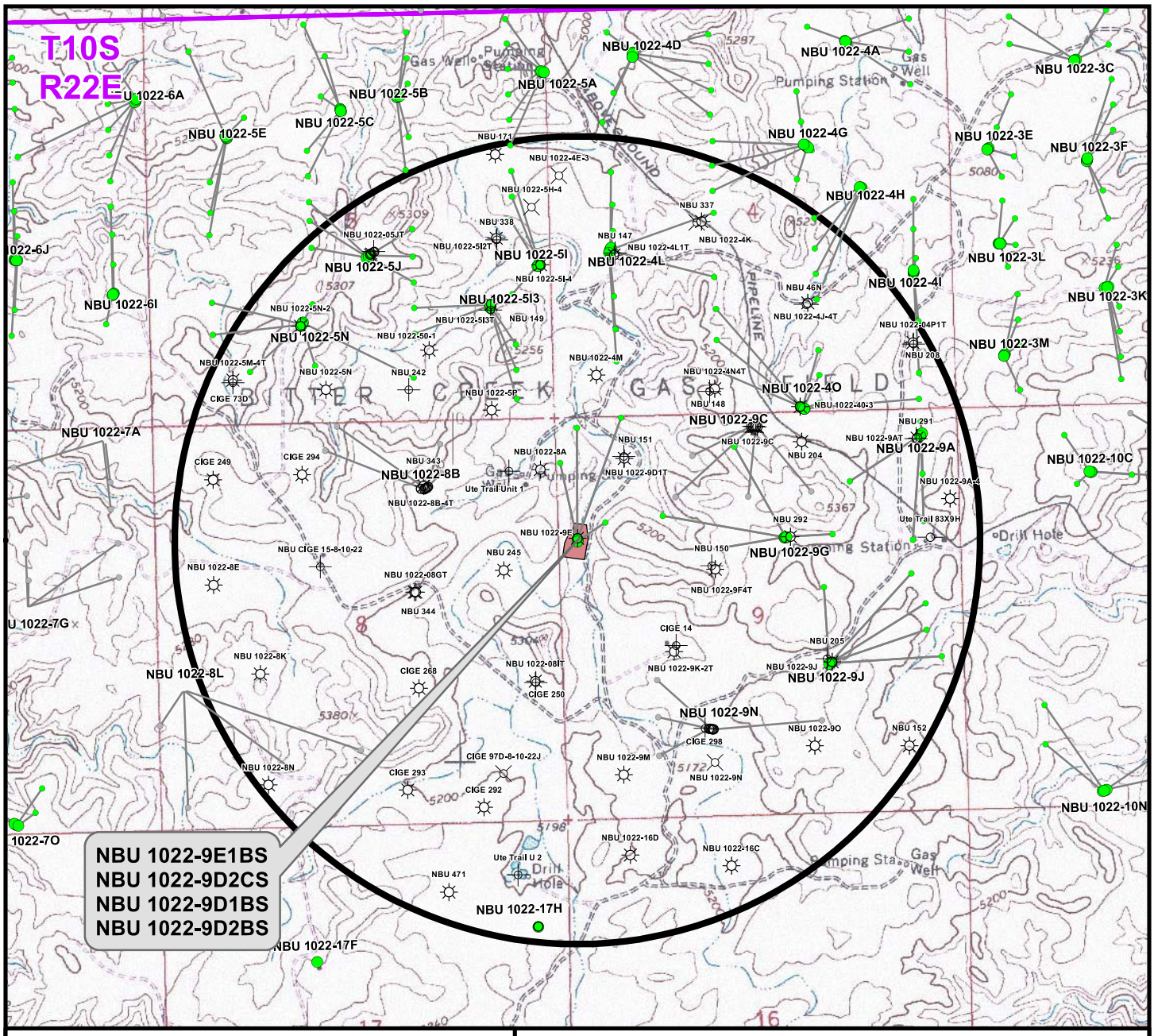
FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1102.00	1112.86	GREEN RIVER
1441.00	1471.53	BIRDSNEST
1895.00	1954.67	MAHOGANY
4257.00	4429.85	WASATCH
6664.00	6836.85	MESAVERDE
8825.99	8998.84	SEGO

Plan: PLAN #1 PRELIMINRAY (NBU 1022-9B4BS/OH)
Created By: Robert Scott Date: 12:01, January 06 2014

RECEIVED: July 01, 2014

API Well Number: 43047545570000



Well locations derived from Utah Division of Oil, Gas and Mining (UDOGM) (oilgas.ogm.utah.gov). The estimated distances from proposed bore locations to the nearest existing bore locations are based on UDOGM data.

Proposed Well	Nearest Well Bore	Footage
NBU 1022-9E1BS	NBU 1022-9E	±419ft
NBU 1022-9D2CS	NBU 1022-8A	±273ft
NBU 1022-9D1BS	NBU 151	±505ft
NBU 1022-9D2BS	NBU 151	±720ft

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Well - 1 Mile Radius
- Producing
- Spudded
- APD Approved
- Preliminary Location
- Deferred
- Cancelled
- Temporarily Abandoned
- Active Injector
- Location Abandoned
- Plugged & Abandoned
- Shut-In

WELL PAD - NBU 1022-9E

TOPO C
NBU 1022-9E1BS, NBU 1022-9D2CS
NBU 1022-9D1BS & NBU 1022-9D2BS
LOCATED IN SECTION 9, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 12
DRAWN: TL	DATE: 18 Nov 2013	12 OF 16
REVISED:	DATE:	

K:\ANADARKO\2013\2013_55_NBU_1022-9_FOCUS\GIS\Maps_ABCDE\NBU 1022-9E\NBU 1022-9E_C.mxd11/21/2013 11:30:06 PM

API Well Number: 43047545570000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9E PAD
Well: NBU 1022-9E1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

WELL DETAILS: NBU 1022-9E1BS

GL 5115 & KB 4 @ 5119.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14517481.66	2073981.63	39.9661560	-109.4526730

DESIGN TARGET DETAILS

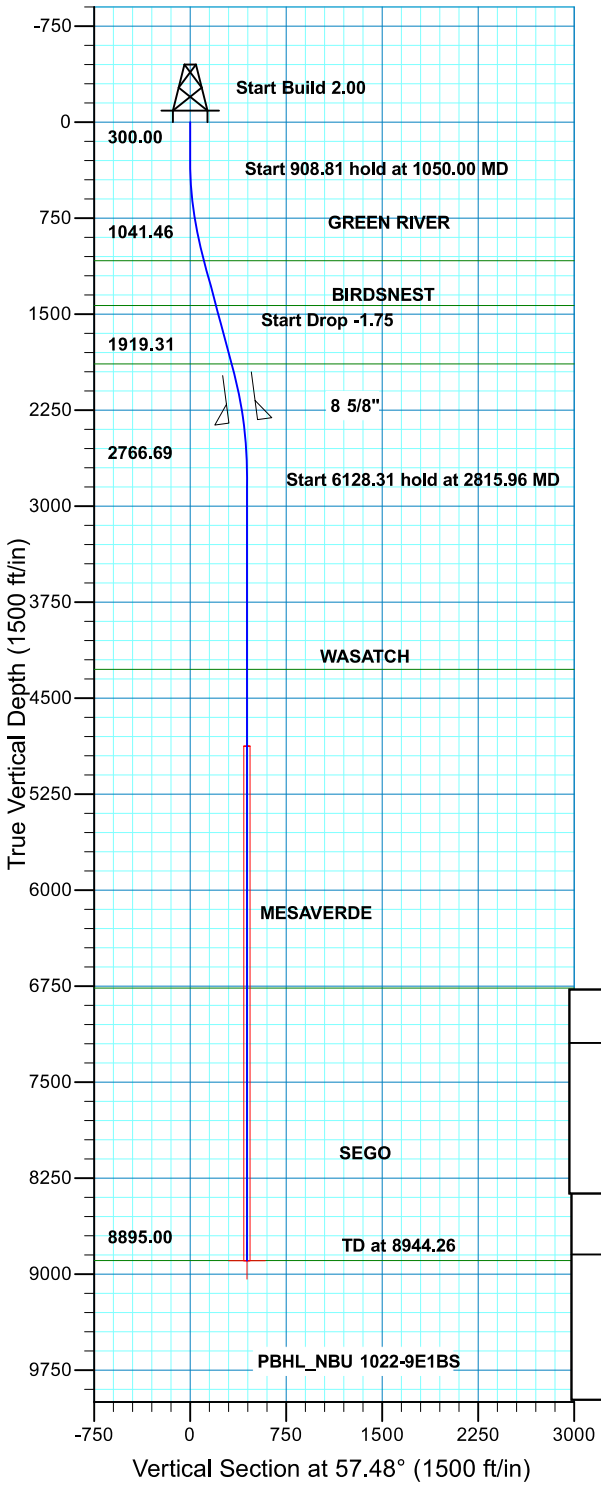
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8895.00	238.92	374.70	14517727.05	2074352.12	39.9668120	-109.4513360	Circle (Radius: 25.00)

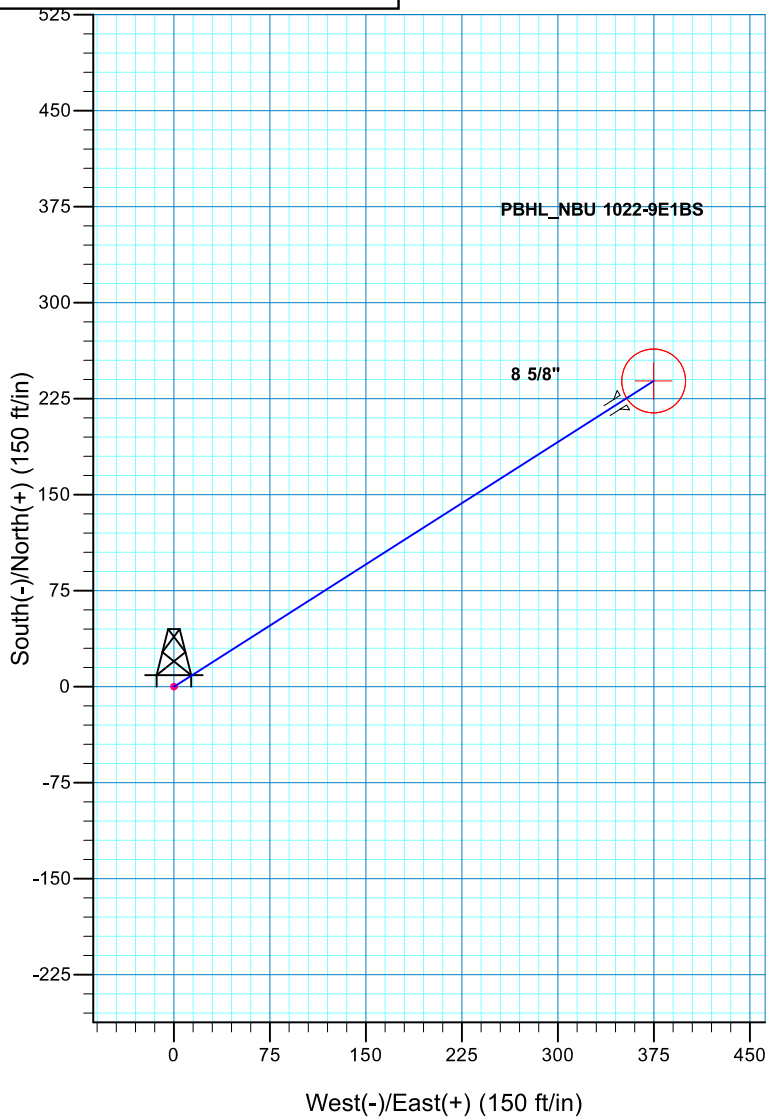
- plan hits target center

T M

Azimuths to True North
Magnetic North: 10.81°

Magnetic Field
Strength: 51977.7snT
Dip Angle: 65.77°
Date: 1/3/2014
Model: BGGM2013





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1050.00	15.00	57.48	1041.46	52.48	82.31	2.00	57.48	97.62	
1958.81	15.00	57.48	1919.31	178.95	280.64	0.00	0.00	332.83	
2815.96	0.00	0.00	2766.69	238.92	374.70	1.75	180.00	444.39	
8944.26	0.00	0.00	8895.00	238.92	374.70	0.00	0.00	444.39	PBHL_NBU 1022-9E1BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S 22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	
1083.00	1093.00	GREEN RIVER	
1433.00	1455.35	BIRDSNEST	
1889.00	1927.44	MAHOGANY	
4276.00	4325.26	WASATCH	
6765.00	6814.26	MESAVERDE	
8894.99	8944.25	SEGO	0.00

Plan: PLAN #1 PRELIMINARY (NBU 1022-9E1BS/OH)
Created By: Robert Scott Date: 12:19, January 06 2014

RECEIVED: July 02, 2014

API Well Number: 43047545570000

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9E PAD
Well: NBU 1022-9D2CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Scientific Drilling

Anadarko Petroleum Corporation

WELL DETAILS: NBU 1022-9D2CS

GL 5115 & KB 4 @ 5119.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude
0.00	0.00	14517491.52	2073983.14	39.9661830	-109.4526670

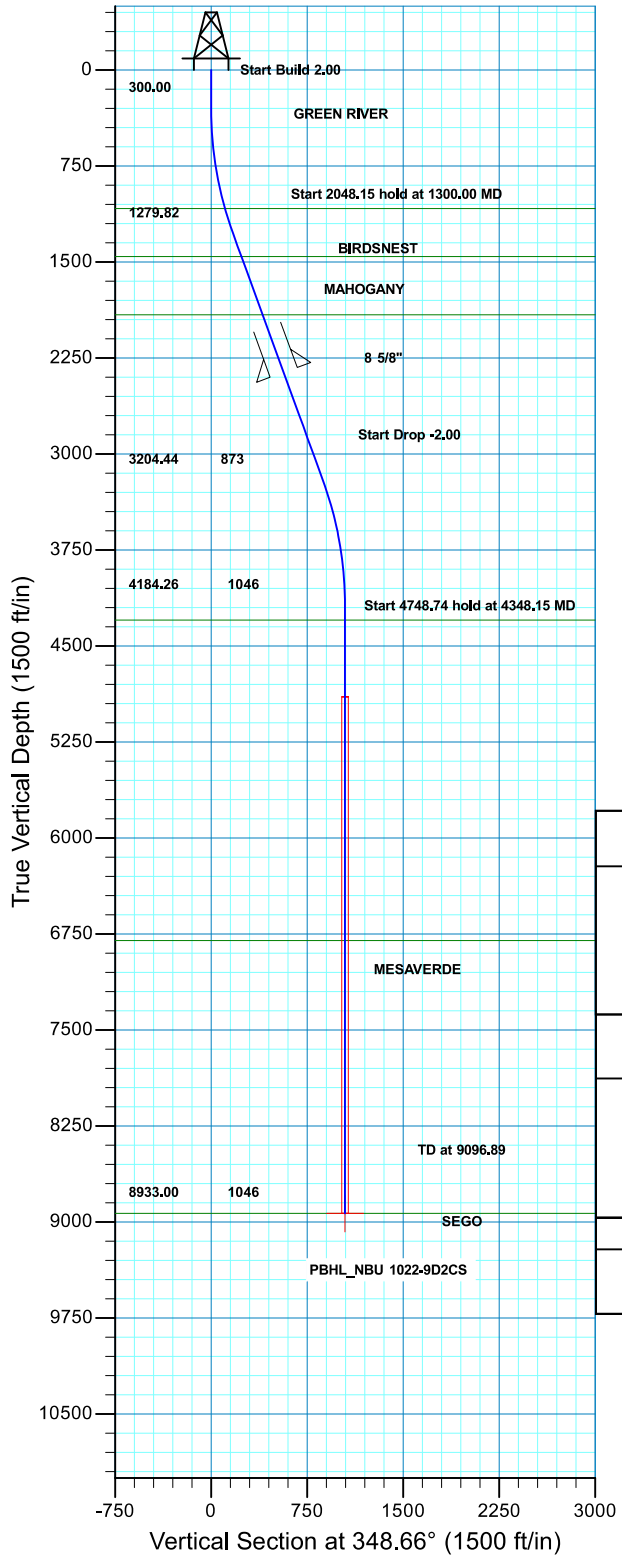
DESIGN TARGET DETAILS

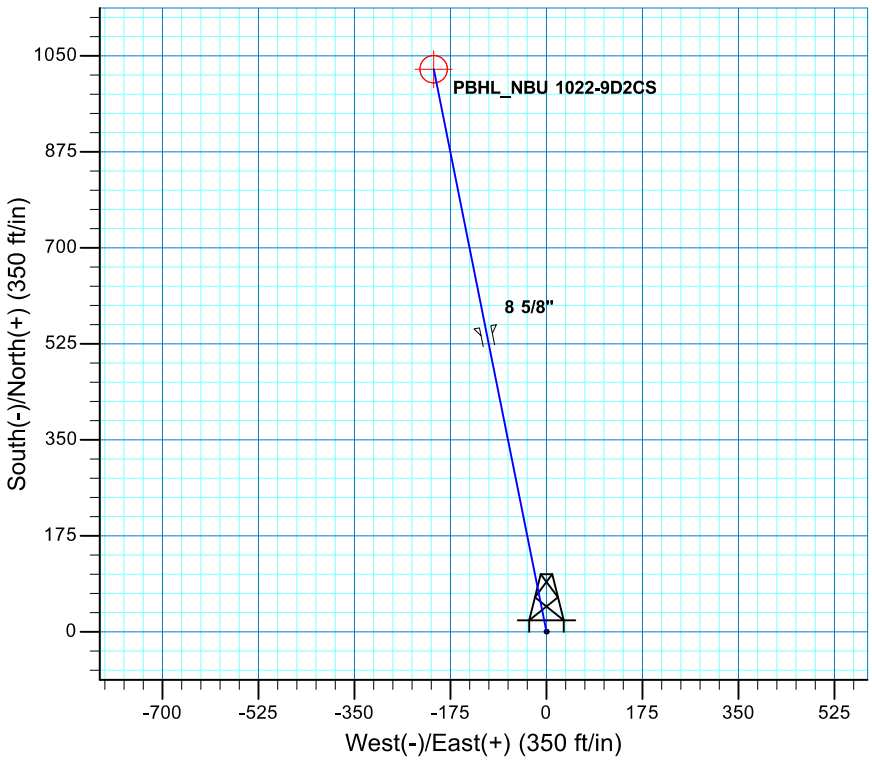
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8933.00	1025.62	-205.70	14518513.41	2073759.67	39.9689990	-109.4534010	Circle (Radius: 25.00)

- plan hits target center

T
Azimuths to True North
Magnetic North: 10.81°

Magnetic Field
Strength: 51977.7snT
Dip Angle: 65.77°
Date: 2014/01/03
Model: BGGM2013





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1300.00	20.00	348.66	1279.82	169.39	-33.97	2.00	348.66	172.77	
3348.15	20.00	348.66	3204.44	856.22	-171.73	0.00	0.00	873.28	
4348.15	0.00	0.00	4184.26	1025.62	-205.70	2.00	180.00	1046.04	
9096.89	0.00	0.00	8933.00	1025.62	-205.70	0.00	0.00	1046.04	PBHL_NBU 1022-9D2CS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S 22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1081.00	1091.01	GREEN RIVER
1457.00	1488.56	BIRDSNEST
1913.00	1973.82	MAHOGANY
4298.00	4461.89	WASATCH
6801.00	6964.89	MESAVERDE
8932.99	9096.88	SEGO

CASING DETAILS

TVD	MD	Name	Size
2363.00	2452.70	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 1022-9D2CS/OH)
Created By: RobertScott Date: 14:50, January 17 2014

Received: July 02, 2014

API Well Number: 43047545570000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9E PAD
Well: NBU 1022-9D2BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.81°

Magnetic Field
Strength: 51977.7snT
Dip Angle: 65.77°
Date: 1/3/2014
Model: BGGM2013

WELL DETAILS: NBU 1022-9D2BS

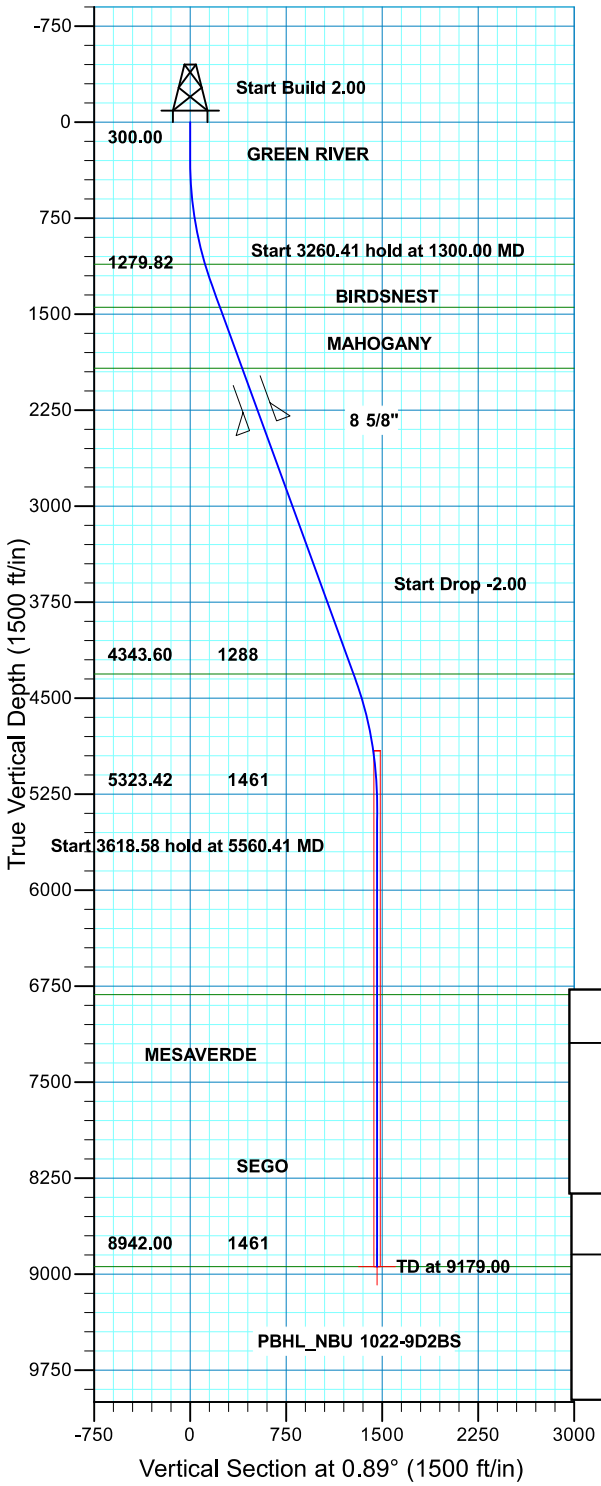
GL 5115 & KB 4 @ 5119.00ft (ASSUMED)

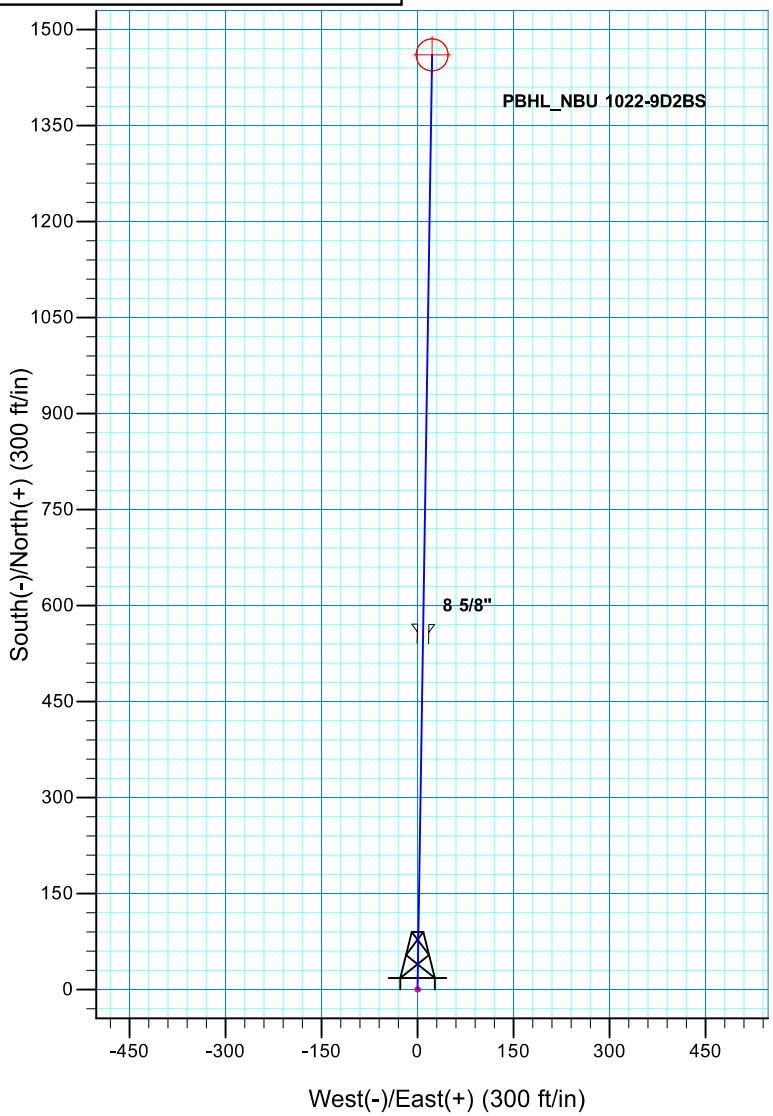
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14517511.24	2073986.16	39.9662370	-109.4526550

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8942.00	1460.49	22.70	14518971.90	2073983.52	39.9702470	-109.4525740	Circle (Radius: 25.00)

- plan hits target center





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1300.00	20.00	0.89	1279.82	172.75	2.68	2.00	0.89	172.77	
4560.41	20.00	0.89	4343.60	1287.74	20.01	0.00	0.00	1287.89	
5560.41	0.00	0.00	5323.42	1460.49	22.70	2.00	180.00	1460.66	
9179.00	0.00	0.00	8942.00	1460.49	22.70	0.00	0.00	1460.66	PBHL_NBU 1022-9D2BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S 22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	
1110.00	1121.20	GREEN RIVER	
1446.00	1476.85	BIRDSNEST	
1923.00	1984.46	MAHOGANY	
4312.00	4526.78	WASATCH	
6816.00	7053.00	MESAVERDE	
8941.99	9178.99	SEGO	0.00

Plan: PLAN #1 PRELIMINARY (NBU 1022-9D2BS/OH)
Created By: Robert Scott Date: 12:15, January 06 2014

RECEIVED: July 02, 2014

API Well Number: 43047545570000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9E PAD
Well: NBU 1022-9D1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

WELL DETAILS: NBU 1022-9D1BS

GL 5115 & KB 4 @ 5119.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14517501.38	2073984.65	39.9662100	-109.4526610

DESIGN TARGET DETAILS

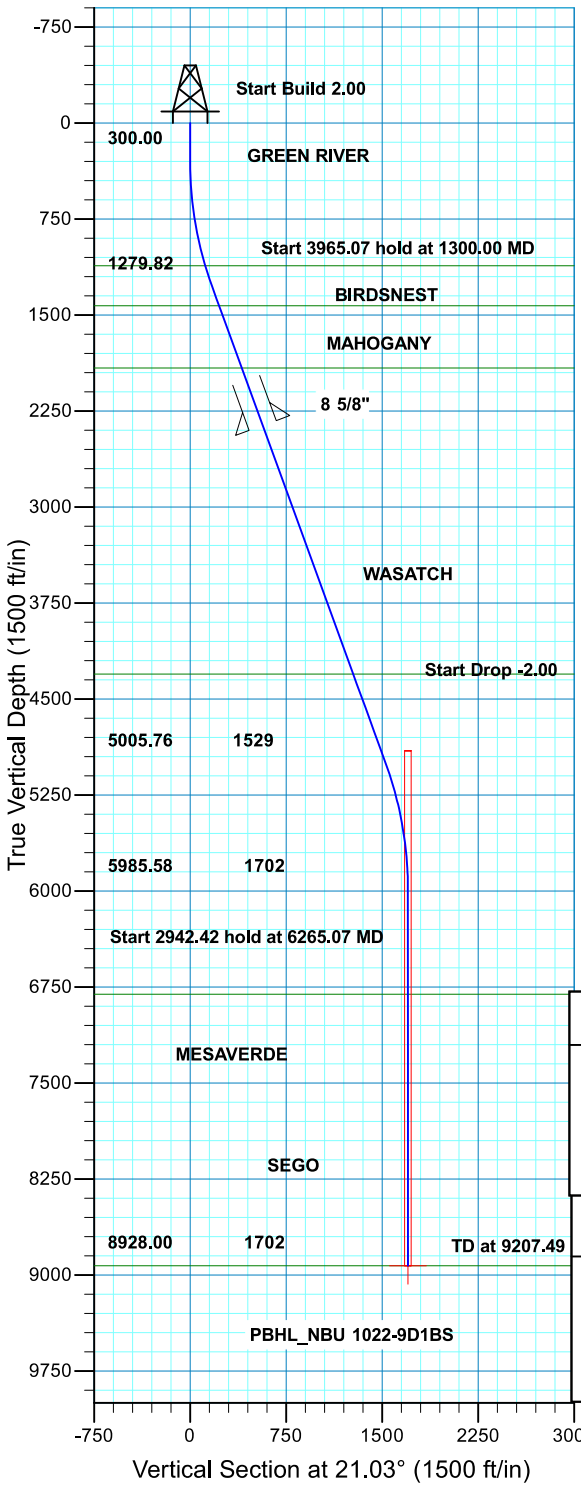
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8928.00	1588.33	610.64	14519100.07	2074567.64	39.9705710	-109.4504820	Circle (Radius: 25.00)

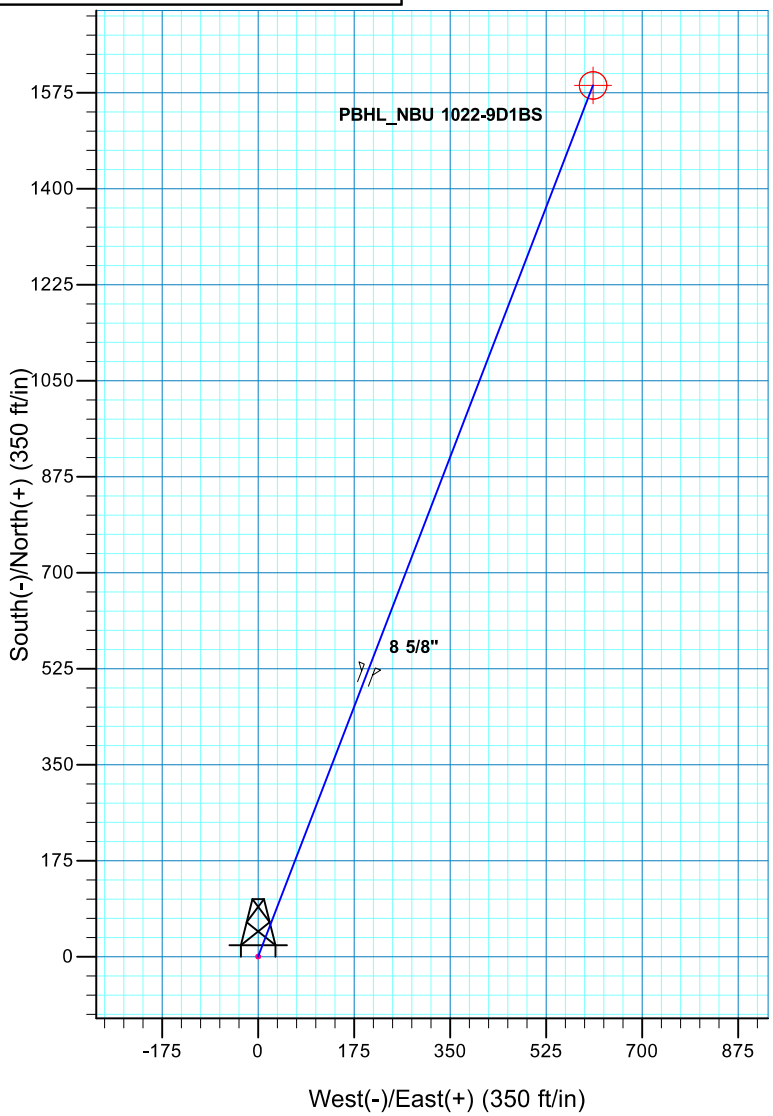
- plan hits target center

T M

Azimuths to True North
Magnetic North: 10.81°

Magnetic Field
Strength: 51977.7snT
Dip Angle: 65.77°
Date: 1/3/2014
Model: BGGM2013





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00
1300.00	20.00	21.03	1279.82	161.26	62.00	2.00	21.03	172.77
5265.07	20.00	21.03	5005.76	1427.07	548.64	0.00	0.00	1528.90
6265.07	0.00	0.00	5985.58	1588.33	610.64	2.00	180.00	1701.67
9207.49	0.00	0.00	8928.00	1588.33	610.64	0.00	0.00	1701.67

PBHL_NBU 1022-9D1BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S 22E
System Datum: Mean Sea Level

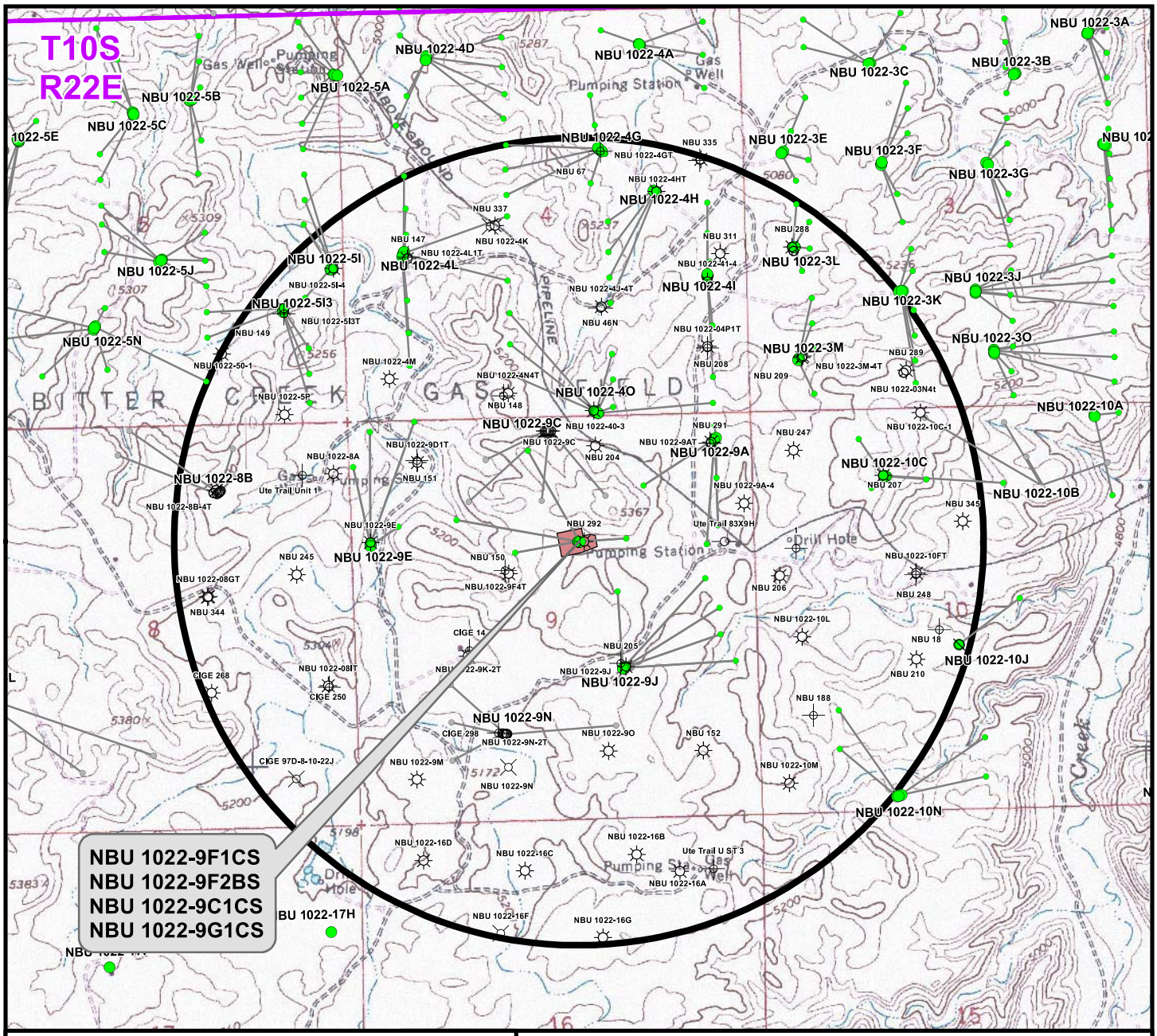
FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1117.00	1128.50	GREEN RIVER
1429.00	1458.76	BIRDSNEST
1915.00	1975.95	MAHOGANY
4306.00	4520.40	WASATCH
6807.00	7086.49	MESAVERDE
8928.00	9207.49	SEGO

Plan: PLAN #1 PRELIMINARY (NBU 1022-9D1BS/OH)
Created By: Robert Scott Date: 12:15, January 06 2014

RECEIVED: July 01, 2014

API Well Number: 43047545570000



Well locations derived from Utah Division of Oil, Gas and Mining (UDOGM) (oilgas.ogm.utah.gov). The estimated distances from proposed bore locations to the nearest existing bore locations are based on UDOGM data.

Proposed Well	Nearest Well Bore	Footage
NBU 1022-9F1CS	NBU 150	±268ft
NBU 1022-9F2BS	NBU 1022-9C3CS BH	±291ft
NBU 1022-9C1CS	NBU 1022-9C	±365ft
NBU 1022-9G1CS	NBU 292	±558ft

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Well - 1 Mile Radius
- Producing
- Spudded
- APD Approved
- Preliminary Location
- Deferred
- Cancelled
- Temporarily Abandoned
- Active Injector
- Location Abandoned
- Plugged & Abandoned
- Shut-In

WELL PAD - NBU 1022-9G

TOPO C
NBU 1022-9F1CS, NBU 1022-9F2BS, NBU 1022-9C1CS & NBU 1022-9G1CS
LOCATED IN SECTION 9, T10S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 12
DRAWN: TL	DATE: 18 Nov 2013	12 OF 16
REVISED:	DATE:	

K:\ANADARKO\2013\2013_55_NBU_1022-9_FOCUS\GIS\Maps_ABCDE\NBU 1022-9G\NBU 1022-9G_C.mxd11/22/2013 2:00:40 PM

API Well Number: 43047545570000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9G PAD
Well: NBU 1022-9F1CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

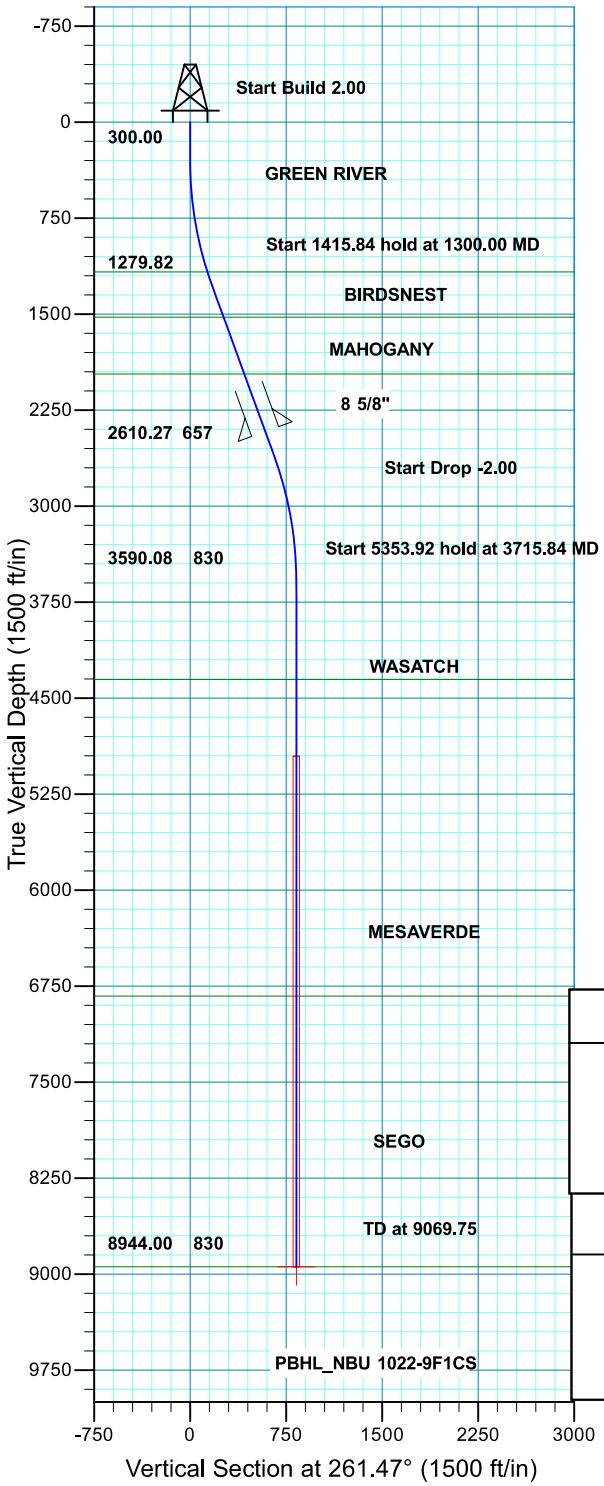
WELL DETAILS: NBU 1022-9F1CS					
GL 5228 & KB 4 @ 5232.00ft (ASSUMED)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14517520.87	2076694.81	39.9661340	-109.4429910

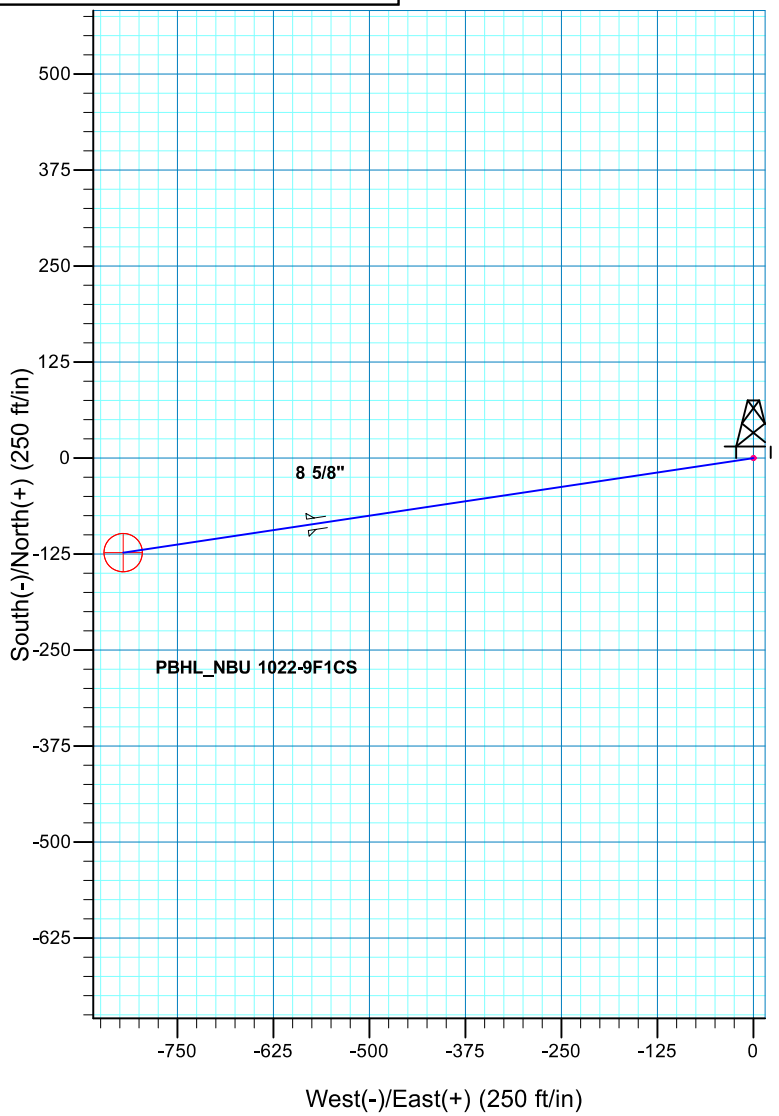
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL - plan hits target center	8944.00	-123.09	-820.60	14517383.47	2075876.48	39.9657960	-109.4459190	Circle (Radius: 25.00)

T M

Azimuths to True North
Magnetic North: 10.80°

Magnetic Field
Strength: 51978.2snT
Dip Angle: 65.77°
Date: 1/3/2014
Model: BGGM2013





SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1300.00	20.00	261.47	1279.82	-25.63	-170.86	2.00	261.47	172.77	
2715.84	20.00	261.47	2610.27	-97.46	-649.74	0.00	0.00	657.01	
3715.84	0.00	0.00	3590.08	-123.09	-820.60	2.00	180.00	829.78	
9069.75	0.00	0.00	8944.00	-123.09	-820.60	0.00	0.00	829.78	PBHL_NBU 1022-9F1CS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1171.00	1185.01	GREEN RIVER
1524.00	1559.86	BIRDSNEST
1968.00	2032.35	MAHOGANY
4355.00	4480.75	WASATCH
6829.00	6954.75	MESAVERDE
8944.00	9069.75	SEGO

Plan: PLAN #1 PRELIMINARY (NBU 1022-9F1CS/OH)
Created By: Robert Scott Date: 12:29 Thursday Jan 16 2014

RECEIVED: July 02, 2014

API Well Number: 43047545570000

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 7/2/2014 **API NO. ASSIGNED:** 43047545570000

WELL NAME: NBU 1022-9B4BS

OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995) **PHONE NUMBER:** 720 929-6828

CONTACT: Joel Malefyt

PROPOSED LOCATION: NENE 09 100S 220E **Permit Tech Review:** ☑

SURFACE: 0412 FNL 0517 FEL **Engineering Review:** ☑

BOTTOM: 0984 FNL 1448 FEL **Geology Review:** ☑

COUNTY: UINTAH

LATITUDE: 39.96949 **LONGITUDE:** -109.43726

UTM SURF EASTINGS: 633457.00 **NORTHINGS:** 4425540.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU 01196-D **PROPOSED PRODUCING FORMATION(S):** WASATCH-MESA VERDE

SURFACE OWNER: 1 - Federal **COALBED METHANE:** NO

RECEIVED AND/OR REVIEWED:

- ☑ **PLAT**
- ☑ **Bond:** FEDERAL - WYB000291
- ☐ **Potash**
- ☑ **Oil Shale 190-5**
- ☐ **Oil Shale 190-3**
- ☐ **Oil Shale 190-13**
- ☑ **Water Permit:** 43-8496
- ☐ **RDCC Review:**
- ☐ **Fee Surface Agreement**
- ☑ **Intent to Commingle**

Commingling Approved

LOCATION AND SITING:

- ☐ **R649-2-3.**

Unit: NATURAL BUTTES

- ☐ **R649-3-2. General**
- ☐ **R649-3-3. Exception**
- ☑ **Drilling Unit**

Board Cause No: Cause 173-14

Effective Date: 12/2/1999

Siting: Suspends General Siting

- ☑ **R649-3-11. Directional Drill**

Comments: Presite Completed

Stipulations:
3 - Commingling - ddoucet
4 - Federal Approval - dmason
15 - Directional - dmason
17 - Oil Shale 190-5(b) - dmason

RECEIVED: July 17, 2014

GARY R. HERBERT
Governor
SPENCER J. COX
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

Permit To Drill
****

Well Name: NBU 1022-9B4BS
API Well Number: 43047545570000
Lease Number: UTU 01196-D
Surface Owner: FEDERAL
Approval Date: 7/17/2014

Issued to:
KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

Authority:
Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:
This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

Commingle:
In accordance with Board Cause No. 173-14, commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

General:
Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:
State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil

shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Notification Requirements:
The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well - contact Carol Daniels at 801-538-5284
  (please leave a voicemail message if not available)
  OR
  submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website
  at http://oilgas.ogm.utah.gov

Reporting Requirements:
All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) - due within 5 days of spudding the well
- Monthly Status Report (Form 9) - due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) - due prior to implementation
- Written Notice of Emergency Changes (Form 9) - due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) - due prior to implementation
- Report of Water Encountered (Form 7) - due within 30 days after completion
- Well Completion Report (Form 8) - due within 30 days after completion or plugging

Approved By:

For John Rogers
Associate Director, Oil & Gas

Form 3160-3
(August 2007)

RECEIVED
JAN 28 2014
BLM

FORM APPROVED
OMB No. 1004-0136
Expires July 31, 2010

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: ☒ DRILL ☐ REENTER	5. Lease Serial No. UTU01196D
	6. If Indian, Allottee or Tribe Name
	7. If Unit or CA Agreement, Name and No. UTU63047A
1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone	8. Lease Name and Well No. NBU 1022-9B4BS
2. Name of Operator KERR MCGEE OIL & GAS LP Contact: JOEL MALEFYT E-Mail: joel.malefyt@anadarko.com	9. API Well No. 43 047 54557
3a. Address 1099 18TH STREET SUITE 1800 DENVER, CO 80202-3779 3b. Phone No. (include area code) Ph: 720-929-6828 Fx: 720-929-7828	10. Field and Pool, or Exploratory NATURAL BUTTES
4. Location of Well *(Report location clearly and in accordance with any State requirements.*)* At surface NENE 412FNL 517FEL 39.969654 N Lat, 109.437214 W Lon At proposed prod. zone NWNE 984FNL 1448FEL 39.968059 N Lat, 109.440534 W Lon	11. Sec., T., R., M., or Blk. and Survey or Area Sec 9 T10S R22E Mer SLB
14. Distance in miles and direction from nearest town or post office* APPROXIMATELY 49.3 MILES SOUTH OF VERNAL, UT	12. County or Parish UINTAH 13. State UT
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 984' 16. No. of Acres in Lease 320.00	17. Spacing Unit dedicated to this well
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 522' 19. Proposed Depth 8999 MD 8826 TVD	20. BLM/BIA Bond No. on file WYB000291
21. Elevations (Show whether DF, KB, RT, GL, etc. 5138 GL 22. Approximate date work will start 07/01/2014	23. Estimated duration 60-90 DAYS

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature	Name (Printed/Typed)	Date
(Electronic Submission)	JOEL MALEFYT Ph: 720-929-6828	01/23/2014

Title: REGULATORY ANALYST

Approved by (Signature)	Name (Printed/Typed)	Date
	Jerry Kenczka	AUG 07 2014
Title: Assistant Field Manager Lands & Mineral Resources	Office: VERNAL FIELD OFFICE	

Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached. CONDITIONS OF APPROVAL ATTACHED

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Additional Operator Remarks (see next page)

Electronic Submission #233046 verified by the BLM Well Information System
For KERR MCGEE OIL & GAS LP, sent to the Vernal
Committed to AFMSS for processing by LESLIE BUHLER on 01/30/2014 ()

DIV. OF OIL, GAS & MINING
RECEIVED
AUG 29 2014

NOTICE OF APPROVAL

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

UDOGM

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VERNAL FIELD OFFICE
170 South 500 East VERNAL, UT 84078 (435) 781-4400

CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company:	**KERR MCGEE OIL & GAS ONSHORE LP**	**Location:**	**NENE SEC 09 T10S R22E**
Well No:	**NBU 1022-9B4BS**	**Lease No:**	**UTU01196D**
API No:	**43-047-54557**	**Agreement:**	**UTU63047A**

OFFICE NUMBER: (435) 781-4400

OFFICE FAX NUMBER: (435) 781-3420

A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.**

NOTIFICATION REQUIREMENTS

Location Construction (Notify Environmental Scientist)	- Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)	- Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	- Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	- Twenty-Four (24) hours prior to running casing and cementing all casing strings to: blm_ut_vn_opreport@blm.gov
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	- Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)	- Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

SURFACE USE PROGRAM
CONDITIONS OF APPROVAL (COAs)

KMG will install bird exclusion netting over reserve pits containing water that are left open for more than 30 days to reduce possibility of exposure to hazardous chemicals (BLM 2012b).

KMG will install bird-excluding devises that prevent the perching and entry of migratory birds on or into its new fired vessel exhaust stacks (BLM 2012b). An infiltration gallery will be constructed in a U.S. Fish and Wildlife Service

(USFWS)-approved location. An infiltration gallery is basically a pit or trench dug within a floodplain to a depth below the water table. Water is drawn from the pit rather than from the river directly. If this is not possible, KMG will limit pumping within the river to off-channel locations that do not connect to the river during high spring flows.

If water cannot be drawn using the measures below, and the pump head will be located in the river channel where larval fish are known to occur, the following measures will apply (BLM 2012b):

KMG will avoid pumping from low-flow or no-flow areas as these habitats tend to concentrate larval fishes.

KMG will avoid pumping to the greatest extent possible, during that period of the year when larval fish may be present (approximately April 1 to August 31).

KMG will avoid pumping, to the greatest extent possible, during the midnight hours (10:00 pm to 2:00 am) as larval drift studies indicate that is a period of greatest daily activity. Dusk is the preferred pumping time as larval drift abundance is lowest. KMG will screen all pump intakes with 3/32-inch mesh material.

Silt fencing will be used to protect cacti that are within 300 feet and downslope or downwind of surface disturbance. Fencing is intended to prevent sedimentation or dust deposition and will be evaluated for effectiveness by a qualified botanist.

A qualified botanist will be on site to monitor surface-disturbing activities when cacti are within 300 feet of any surface disturbance.

Dust abatement (consisting of water only) will occur during construction where plants are closer than 300 feet from surface-disturbing activities.

Cacti within 300 feet of proposed surface disturbance will be flagged immediately prior to surface-disturbing activities and flags will be removed immediately after surface-disturbing activities are completed. Leaving cacti flagged for as short a time as possible will minimize drawing attention to the cacti location and reduce potential for theft.

Pipelines will be sited to maximize distance from adjacent cacti locations.

Project personnel associated with construction activities will be instructed to drive at a speed limit of 15 miles per hour on unpaved roads and remain in existing roadway ROWs at all times.

For permanent surface pipelines, KMG will adhere to existing cacti survey/buffer guidelines of 300 feet, or amended guidelines if developed by the BLM and USFWS. In areas where avoidance by 300 feet is not feasible and populations or individuals of Sclerocactus wetlandicus are within 50 feet of proposed project components, the following actions will be taken to minimize impacts:

Prior to construction, flag individual cactus. Once pipe installation is complete, remove the flagging.

Prior to construction, install protective fencing around the cacti if they are down gradient of the surface pipe. Once pipe installation is complete, remove the protective fencing.

A qualified botanist will be present during construction to monitor surface line installation.

As per discussions and email with the BLM on October 18, 2012, KMG will contribute to the Utah Sclerocactus mitigation fund to further study the effects of development on Sclerocactus wetlandicus in the Uinta Basin and the effectiveness of current mitigation measures. This contribution will be provided over the first 5 years of project development and in lieu of the required 3–year monitoring described in the Vernal BLM RMP for cacti found within 300 feet of planned surface disturbance that cannot be rerouted. This is consistent with the intent of the RMP for the effects of development to be effectively monitored within the Project Area and to better assess conservation measures to avoid or minimize these impacts in the future.

The following considerations are required for those wells where KMG deems completion fluid recycling is appropriate based on new well density and topography.

Temporary lines associated with recycling of completion water will be sited in existing ROWs. The pressure in the lines is less than 50 pounds per square inch and the lines are constructed of rigid aluminum; therefore, virtually no movement will occur during operation.

If surface water completion lines are placed within the footprint of a road disturbance where vegetation does not grow, Sclerocactus wetlandicus surveys will not be necessary.

A qualified botanist will survey a 50-foot-wide corridor along roads where temporary lines are planned to ensure Sclerocactus wetlandicus is not present. If cacti are present within the 50-foot-wide survey corridor and avoidance is necessary (to ensure the line is more than 50 feet away from identified cactus), the new alignment will, if possible, be such that the cacti are topographically higher than the re-aligned line so a potential spill from the line will not impact the identified cacti.

If it is not possible to re-align the surface lines to avoid individuals or populations of the Sclerocactus wetlandicus that are within 50 feet of surface disturbance, the following actions will be taken to minimize impacts:

Prior to construction, KMG will flag individual cacti. Once pipe installation is complete, remove the flagging.

Prior to construction, KMG will install protective fencing around the cacti if they are down gradient of the surface pipe. Once pipe installation is complete, remove the protective fencing.

A qualified botanist will be present during construction to monitor surface line installation.

In addition, through several discussions and meetings in December 2011 and January 2012, KMG/Anadarko committed to the following conservation measures in core conservation areas for Sclerocactus wetlandicus.

KMG will continue to abide by mitigation measures outlined in the 2010 Programmatic Biological Opinion (BO) if any development is proposed in cactus core conservation areas.

Avoidance of cactus by 300 feet will take priority in the expansion of pads within the cactus core conservation areas. When the 300-foot buffer cannot be avoided in pad expansion, KMG will notify the USFWS and work with the BLM to determine pad expansion that places a priority on avoiding cactus impacts.

KMG will follow existing ROWs and/or roads in constructing new buried pipelines within the cactus core conservation areas. For instance, where a new buried pipeline is unable to follow an existing ROW and/or road and exceeds 600 feet in length, KMG will work with the USFWS and the BLM to determine a route that places a priority on avoiding cactus impacts.

KMG retains the right to perform necessary maintenance activities on all existing pipelines within the cactus core conservation areas. Maintenance activities on pipelines within cactus core conservation areas will avoid impacts to cactus, to the extent possible.

KMG will not create new pads in the cactus core conservation areas without formal Service consultation, with the exception of 15 quarter-quarter sections within the cactus core conservation areas where new pad construction will be allowed as a condition of this consultation, with the following conditions.

When topographically feasible, expansion of existing well pads will take priority in Level 1 cactus core conservation areas.

Where feasible, new pads will be placed on or adjacent to existing disturbance (e.g. roads) in the cactus core conservation areas.

Where topographically feasible, drill mats or similar devices will be used for new well pad development in the cactus core conservation areas.
Due to the high value of Level 1 cactus core conservation areas, KMG will notify the Service and work with the BLM (and the BIA if on tribal surface) to determine new pad placement that places a priority on avoiding cactus impacts when in these areas.

If feasible, new well pad development will not occur in cactus core conservation areas located in the northeast corner of the Project Area (e.g. the population located in T8S R23E and the northern portion of T9S R23E)

KMG will fund a study in the amount of $100,000 in addition to typical expenditures for pad reclamation, to evaluate the technical feasibility of re-planting the Uinta Basin hookless cactus during pad reclamation activities. KMG will be allowed to review and provide input to the study work plan prior to study implementation and will be given an opportunity to review study results prior to submittal of results for publication. KMG will exercise no control over final study design or study results submitted for publication.

DOWNHOLE PROGRAM
CONDITIONS OF APPROVAL (COAs)

SITE SPECIFIC DOWNHOLE COAs:

Kerr-McGee Oil & Gas Onshore L.P. shall adhere to all referenced requirements in the SOP (version: "Standard Operating Practice Agreement for the Greater Natural Buttes Field", Oct 21, 2012). The operator shall also comply with applicable laws and regulations; with lease terms Onshore Oil and Gas Orders, NTL's; and with other orders and instructions of the, authorized officer.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- **Cement baskets shall not be run on surface casing.**
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.

- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.

- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.

- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.

- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.

- **Please submit an electronic copy of all other logs run on this well in CD (compact disc) format to the Vernal BLM Field Office. This submission will supersede the requirement for submittal of paper logs to the BLM.**

- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.

- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at www.ONRR.gov.

- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:

    - Operator name, address, and telephone number.

    - Well name and number.

    - Well location (¼¼, Sec., Twn, Rng, and P.M.).

    - Date well was placed in a producing status (date of first production for which royalty will be paid).

- The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
- The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
- Unit agreement and/or participating area name and number, if applicable.
- Communitization agreement number, if applicable.

- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.

- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.

- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.

- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.

- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.

- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.

- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.

- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.

- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER:
UTU 01196-D

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME:
NATURAL BUTTES

1. TYPE OF WELL
Gas Well

8. WELL NAME and NUMBER:
NBU 1022-9B4BS

2. NAME OF OPERATOR:
KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER:
43047545570000

3. ADDRESS OF OPERATOR:
P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER:
720 929-6100

9. FIELD and POOL or WILDCAT:
NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0412 FNL 0517 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: NENE Section: 09 Township: 10.0S Range: 22.0E Meridian: S

COUNTY:
UINTAH

STATE:
UTAH

11.
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☑ SPUD REPORT Date of Spud: 5/13/2015	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DRILLING REPORT Report Date:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Spud well 05/13/2015 @ 07:30. Drill 24" conductor hole to 40', run 14" X .250 wall conductor pipe, cement with 81 sacks ready mix.
Anticipated surface spud date and surface casing cement 06/01/2015.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
May 15, 2015

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Doreen Green	435 781-9758	Regulatory Analyst II
SIGNATURE		**DATE**
N/A		5/15/2015

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 01196-D

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 1022-9B4BS

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047545570000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 **PHONE NUMBER:** 720 929-6100

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0412 FNL 0517 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 09 Township: 10.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☑ SUBSEQUENT REPORT Date of Work Completion: 9/25/2015	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DRILLING REPORT Report Date:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☑ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The NBU 1022-9B4BS well was placed on production 9/25/2015 after a new well completion. Producing from the MesaVerde. Thank you.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
September 28, 2015

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Jennifer Thomas	720 929-6808	Regulatory Specialist
SIGNATURE N/A		**DATE** 9/28/2015

Form 3160-4
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No. UTU01196D

1a. Type of Well ☐ Oil Well ☒ Gas Well ☐ Dry ☐ Other
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr.
Other _____

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No. UTU63047A

2. Name of Operator KERR-MCGEE OIL AND GAS ONSHORE LP
Contact: JENNIFER THOMAS
E-Mail: Jennifer.Thomas@anadarko.com

8. Lease Name and Well No. NBU 1022-9B4BS

3. Address P.O. BOX 173779 DENVER, CO 80217

3a. Phone No. (include area code) Ph: 720-929-6808

9. API Well No. 43-047-54557

4. Location of Well (Report location clearly and in accordance with Federal requirements)*

At surface NENE 412FNL 517FEL 39.969654 N Lat, 109.437214 W Lon

At top prod interval reported below NWNE 979FNL 1450FEL

At total depth NWNE 989FNL 1447FEL 39.968059 N Lat, 109.440534 W Lon

10. Field and Pool, or Exploratory NATURAL BUTTES

11. Sec., T., R., M., or Block and Survey or Area Sec 9 T10S R22E Mer SLB

12. County or Parish UINTAH

13. State UT

14. Date Spudded 05/13/2015

15. Date T.D. Reached 07/09/2015

16. Date Completed ☐ D & A ☒ Ready to Prod. 09/25/2015

17. Elevations (DF, KB, RT, GL)* 5150 KB

18. Total Depth: MD 9015 TVD 8846

19. Plug Back T.D.: MD 8956 TVD 8787

20. Depth Bridge Plug Set: MD TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)
RADIAL CEMENT BOND GAMMA RAY CCL TEMP

22. Was well cored? ☒ No ☐ Yes (Submit analysis)
Was DST run? ☒ No ☐ Yes (Submit analysis)
Directional Survey? ☐ No ☒ Yes (Submit analysis)

23. Casing and Liner Record *(Report all strings set in well)*

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
24.000	14.000 STL	36.7	0	40		81			
11.000	8.625 J-55	28.0	13	2449		975		0	
7.875	4.500 I-80	11.6	13	8998		1680		2390	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.375	8449							

25. Producing Intervals / 26. Perforation Record

	Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A)	MESA VERDE	6901	9015	6939 TO 8916	0.410	192	OPEN
B)							
C)							
D)							

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
6939 TO 8916	PUMP 12497 BBLS SLICKWATER, 48 BBLS 15% HCL ACID, 263240 LBS 30/50 MESH SAND

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
09/25/2015	10/12/2015	24	→	6.0	1111.0	218.0			FLOWS FROM WELL

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
20/64	781	1279.0	→	6	1111	218		PGW

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
			→					

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #321221 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

RECEIVED: Oct. 23, 2015

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status

29. Disposition of Gas *(Sold, used for fuel, vented, etc.)*
SOLD

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
				GREEN RIVER	1122
				BIRD'S NEST	1475
				MAHOGANY	1981
				WASATCH	4459
				MESA VERDE	6901

32. Additional remarks (include plugging procedure):

33. Circle enclosed attachments:

1. Electrical/Mechanical Logs (1 full set req'd.)
2. Geologic Report
3. DST Report
4. Directional Survey
5. Sundry Notice for plugging and cement verification
6. Core Analysis
7 Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

Electronic Submission #321221 Verified by the BLM Well Information System.
For KERR-MCGEE OIL AND GAS ONSHORE, sent to the Vernal

Name *(please print)* JENNIFER THOMAS Title REGULATORY SPECIALIST III

Signature (Electronic Submission) Date 10/23/2015

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fradulent statements or representations as to any matter within its jurisdiction.

**** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ****

RECEIVED: Oct. 23, 2015

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-9B4BS RED		Spud date: 6/3/2015	
Project: UTAH-UINTAH	Site: NBU 1022-9A PAD		Rig name no.: PROPETRO 12/12, ENSIGN 145/145
Event: DRILLING	Start date: 6/3/2015		End date: 7/11/2015
Active datum: RKB @5,150.00usft (above Mean Sea Level)	UWI: NE/NE/0/10/S/22/E/9/0/0/26/PM/N/412/E/0/517/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
5/13/2015	7:30 - 8:30	1.00	DRLCON	2	A	P	9	DRILL 24" CONDUCTOR HOLE TO 40'
	8:30 - 9:30	1.00	DCSGCON	12	E	P	49	SET 14" CONDUCTOR CASING AND CEMENT WITH 81 SX CEMENT
6/3/2015	0:00 - 7:00	7.00	MIRU	01	B	P	49	WAIT ON DAYLIGHT
	7:00 - 15:00	8.00	MIRU	01	B	P	49	MOVE FROM VERNAL YARD AND RIG UP, SET MATTING BOARD, SET RIG IN PLACE ON NBU 1022-9B4BS WELL 1 OF 5, JSA , RIG UP FLOW AND MUD LINES, REVIEW DIRECTIONAL PLANS AND PLATS AND VERIFY LAT/LONGS, VERIFY DIRECTIONAL DRILLERS PLAN IS THE MOST RECENT AND APPROVED VERSION REFERENCE WELLBORE DIAGRAMS FOR EXACT CASING DESIGN AND GENERAL OVERVIEW OF WELLBORE PRIOR TO SPUD.
	15:00 - 16:30	1.50	MIRU	23		P	49	PRE-SPUD MEETING / SAFETY MEETING
	16:30 - 17:30	1.00	MIRU	01	B	P	49	FINISH RIGGING UP SOLIDS CONTROL EQUIPMENT
	17:30 - 18:00	0.50	MIRU	23		P	49	NIGHT CREW SAFETY MEETING
	18:00 - 20:00	2.00	MIRU	01	B	P	49	FINISH RIG UP, PRE SPUD INSPECTION, FILL PITS
	20:00 - 21:30	1.50	DRLSUR	02	B	P	49	PICK UP NOV 1.83 DEGREE BENT MOTOR (RUN # 1) .17 REV/GAL PICK UP 12.25" DRILL BIT. SPUD ACTUAL@ 06/03/2015 20:00PM DRILL 12.25" HOLE F/ 40' T/ 210@ 113'PH) WEIGHT ON BIT 25 K STROKES PER MINUTE = 120 GALLONS PER MINUTE = 491 PRESSURE ON/OFF (BOTTOM) 540/460 ROTARY RPM 55 MOTOR RPM 83 TOTAL RPM 138 UP/DOWN/ ROTATE 25/25/25 K. DRAG 0 K. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING RUNNING VOLUME OVER BOTH SHAKERS NO HOLE ISSUES
	21:30 - 23:00	1.50	DRLSUR	06	A	P	219	CCH, TRIP OUT, CHANGE BIT TO 11" (RUN #1 ON REED)
	23:00 - 0:00	1.00	DRLSUR	06	A	P	219	SCRIBE DIRECTIONAL TOOLS,TIH WITH BHA #2
6/4/2015	0:00 - 0:30	0.50	DRLSUR	06	A	P	219	CONTINUE TO SCRIBE DIRECTIONAL TOOLS,TIH WITH BHA #2

RECEIVED: Oct. 23, 2015

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-9B4BS RED		Spud date: 6/3/2015	
Project: UTAH-UINTAH	Site: NBU 1022-9A PAD		Rig name no.: PROPETRO 12/12, ENSIGN 145/145
Event: DRILLING	Start date: 6/3/2015		End date: 7/11/2015
Active datum: RKB @5,150.00usft (above Mean Sea Level)	UWI: NE/NE/0/10/S/22/E/9/0/0/26/PM/N/412/E/0/517/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	0:30 - 5:30	5.00	DRLSUR	02	D	P	219	DRILL 11" SURFACE HOLE F/ 210' TO 730' (520'@ 104'PH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=120,GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 930 / 690. ROTARY RPM 55 MOTOR RPM 83,TOTAL RPM 138. UP/DOWN/ ROT 72/58/64 K. DRAG 8 K. DIRECTIONAL PLAN CURRENTLY 2.17' HIGH / 4.8' RIGHT SLIDE 191' = @ 3.17 HRS CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING. RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES
	5:30 - 6:00	0.50	DRLSUR	23		P	739	PRE TOUR SAFETY MEETING
	6:00 - 12:00	6.00	DRLSUR	02	D	P	739	DRILL 11" SURFACE HOLE F/ 730' TO 1210'(480'@ 80'PH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=120,GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 930 / 690. ROTARY RPM 55 MOTOR RPM 83,TOTAL RPM 138. UP/DOWN/ ROT 72/58/64 K. DRAG 8 K. DIRECTIONAL PLAN CURRENTLY 6.8' HIGH / 0.08' RIGHT SLIDE 56' = @ 0.50 HRS CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING. RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES
	12:00 - 17:30	5.50	DRLSUR	02	D	P	1219	DRILL 11" SURFACE HOLE F/ 1,210' TO 1,600'(390'@ 70.9'PH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=120, GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1,050 / 830. ROTARY RPM 45 MOTOR RPM 83, TOTAL RPM 128. UP/DOWN/ ROT 75/60/65 K. DRAG 10 K. DIRECTIONAL PLAN CURRENTLY 3.23' HIGH / 3.9' RIGHT SLIDE 246' = @ 5.25 HRS CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING. RUNNING VOLUME OVER BOTH SHAKERS. HOLE ISSUES = LOSING RETURNS AIR ON @ 1,550'
	17:30 - 18:00	0.50	DRLSUR	23		P	1609	PRE TOUR SAFETY MEETING
	18:00 - 19:00	1.00	DRLSUR	02	D	P	1609	DRILL 11" SURFACE HOLE F/ 1,600' TO 1,660'(60'@ 60'PH).
	19:00 - 20:30	1.50	DRLSUR	08	B	Z	1669	TOOH 5 JTS, REPLACE BRAKE CALIPER ON POWER HEAD, TIH 5 JTS TO 1,660'

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-9B4BS RED		Spud date: 6/3/2015	
Project: UTAH-UINTAH	Site: NBU 1022-9A PAD		Rig name no.: PROPETRO 12/12, ENSIGN 145/145
Event: DRILLING	Start date: 6/3/2015		End date: 7/11/2015
Active datum: RKB @5,150.00usft (above Mean Sea Level)	UWI: NE/NE/0/10/S/22/E/9/0/0/26/PM/N/412/E/0/517/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	20:30 - 0:00	3.50	DRLSUR	02	D	P	1669	DRILL 11" SURFACE HOLE F/ 1,660' TO 1,900'(240'@ 68.5'PH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=120, GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 940 / 760 ROTARY RPM 55 MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 81/63/70 K. DRAG 11 K. DIRECTIONAL PLAN CURRENTLY 4.2' HIGH / 4.1' RIGHT SLIDE 59' = @ 1.08 HRS CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING. RUNNING VOLUME OVER BOTH SHAKERS. HOLE ISSUES = LOSING RETURNS AIR ON @ 1,550'
6/5/2015	0:00 - 5:30	5.50	DRLSUR	02	D	P	1909	DRILL 11" SURFACE HOLE F/ 1,900' TO 2230'(330'@ 60'PH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=120, GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 940 / 760 ROTARY RPM 55 MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 90/65/75 K. DRAG 15 K. DIRECTIONAL PLAN CURRENTLY 4.2' HIGH / 4.1' RIGHT SLIDE 60' = @ .83 HRS CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE AND MUD CLEANER DE WATERING. RUNNING VOLUME OVER BOTH SHAKERS. HOLE ISSUES = LOSING RETURNS AIR ON @ 1,550'
	5:30 - 6:00	0.50	DRLSUR	23		P	2239	SAFETY MEETING
	6:00 - 10:00	4.00	DRLSUR	02	D	P	2239	DRILL 11" SURFACE HOLE F/ 2230' TO 2475'(245'@ 62'PH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=120, GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 940 / 760 ROTARY RPM 55 MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 90/65/75 K. DRAG 15 K. DIRECTIONAL PLAN CURRENTLY 4.2' HIGH / 4.1' RIGHT SLIDE 60' = @ .83 HRS CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE AND MUD CLEANER DE WATERING. RUNNING VOLUME OVER BOTH SHAKERS. HOLE ISSUES = LOSING RETURNS AIR ON @ 1,550'

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-9B4BS RED		Spud date: 6/3/2015	
Project: UTAH-UINTAH	Site: NBU 1022-9A PAD		Rig name no.: PROPETRO 12/12, ENSIGN 145/145
Event: DRILLING	Start date: 6/3/2015		End date: 7/11/2015
Active datum: RKB @5,150.00usft (above Mean Sea Level)	UWI: NE/NE/0/10/S/22/E/9/0/0/26/PM/N/412/E/0/517/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	10:00 - 12:00	2.00	CSGSUR	05	C	P	2484	CIRCULATE AND CONDITION HOLE VOLUME IS CLEAN COMING OVER SHAKERS, 1000 BBLS H20 ON LOCATION FOR DRILLING 1000 BBLS H20 ON LOCATION FOR CEMENT JOB
	12:00 - 17:00	5.00	CSGSUR	06	A	P	2484	TRIP OUT OF HOLE, LAY DOWN DRILL STRING, BHA, LAY DOWN DIRECTIONAL TOOLS, MOTOR, AND, BIT.
	17:00 - 18:00	1.00	CSGSUR	12	A	P	2484	MOVE CAT WALK & PIPE RACKS, JSA , R/U TO RUN 8.625 CSG (HEAVY RAIN) PRE-JOB SAFETY MEETING
	18:00 - 21:00	3.00	CSGSUR	12	C	P	2484	RUN 55 JOINTS OF 8-5/8" 28# J-55 LT&C CASING. RAN 1 CENTRALIZER ON FIRST THREE JOINTS, AND EVERY TWO JOINT FOR 2 JOINTS FOR A TOTAL OF 5 CENTRALIZERS. RUN CASING TO BOTTOM WITH NO PROBLEMS. SET FLOAT SHOE @ 2,440' SET TOP OF BAFFLE PLATE @ 2,394' LANDED 4' HIGH

RECEIVED: Oct. 23, 2015

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Event: DRILLING	Start date: 6/3/2015		End date: 7/11/2015
Active datum: RKB @5,150.00usft (above Mean Sea Level)	UWI: NE/NE/0/10/S/22/E/9/0/0/26/PM/N/412/E/0/517/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	21:00 - 0:00	3.00	CSGSUR	12	E	P	2484	PRE JOB SAFETY MEETING WITH PRO PETRO CEMENTERS. RIG UP AND INSTALL CEMENT HEAD, START CEMENT OPERATIONS. PRESSURE TEST LINES TO 2500 PSI. PUMP 110 BBLS H2O AND PUMP 20 BBLS OF 8.4# GEL WATER AHEAD. MIX AND PUMP (300 SX) 61.4 BBLS OF 15.8# 1.15 YP 5 GAL/SK PREMIUM CEMENT W/ 2% CALC. DROP PLUG ON FLY. DISPLACE W/ 149 BBLS OF H20. NO CIRC THROUGH OUT. FINAL LIFT OF 200 PSI AT 7 BBL/MIN. BUMP PLUG WITH 700 PSI FOR 5 MIN. FLOAT HELD. RELEASE RIG 06-05-2015 @ 23:59 HRS, RIGGED DOWN CEMENT HEAD, PICKED UP LANDING JOINT, PULLED BUSHINGS, PULLED DIVERTER RUBBER , SET ELEVATORS, CASING RAN DOWN 1' BEFORE SEATING DOWN ON CEMENT. LEFT 46.5" STICK UP. RUN 200' OF 1" PIPE DOWN BACK SIDE OF 8.5/8" CASING ANNULUS, R/D PROPETRO RIG. TOP JOB # 1: PUMP CEMENT DOWN ONE INCH PIPE WITH 100 SX PREMIUM CEMENT WITH 4% CACL2 & .25 LB/SX FLOCELE. 20.4 BBLS OF SLURRY MIXED AT 15.8 PPG WITH YIELD OF 1.15 CF/SX. NO CEMENT TO SURFACE. TOP JOB # 2: PUMP CEMENT DOWN ONE INCH PIPE WITH 150 SX PREMIUM CEMENT WITH 4% CACL2 & .25 LB/SX FLOCELE. 30.7 BBLS OF SLURRY MIXED AT 15.8 PPG WITH YIELD OF 1.15 CF/SX. NO CEMENT TO SURFACE. TOP JOB # 3: PUMP CEMENT DOWN ONE INCH PIPE WITH 150 SX PREMIUM CEMENT WITH 4% CACL2 & .25 LB/SX FLOCELE. 30.7 BBLS OF SLURRY MIXED AT 15.8 PPG WITH YIELD OF 1.15 CF/SX. NO CEMENT TO SURFACE. TOP JOB # 4: PUMP CEMENT DOWN ONE INCH PIPE WITH 100 SX PREMIUM CEMENT WITH 4% CACL2 & .25 LB/SX FLOCELE. 20.4 BBLS OF SLURRY MIXED AT 15.8 PPG WITH YIELD OF 1.15 CF/SX. NO CEMENT TO SURFACE. TOP JOB # 5: PUMP CEMENT DOWN ONE INCH PIPE WITH 175 SX PREMIUM CEMENT WITH 4% CACL2 & .25 LB/SX FLOCELE. 35.8 BBLS OF SLURRY MIXED AT 15.8 PPG WITH YIELD OF 1.15 CF/SX. CEMENT TO SURFACE AND HOLDING. RELEASE CEMENTERS @6/6/15 09:00

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Active datum: RKB @5,150.00usft (above Mean Sea Level)	UWI: NE/NE/0/10/S/22/E/9/0/0/26/PM/N/412/E/0/517/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
6/25/2015	9:00 - 20:00	11.00	RIGINS	01	E	P	2484	WE MOVED THE CATWALK, PIPE RACKS, MOVED PIPE OUT OF THE BASKETS THAT NEEDED SHIPPED FOR INSPECTION (ONCE DERRICK IS DOWN THEY WOULD BE INACCESABLE) THE CREW WALKED THE RIG FORWARD AND THEN SPUN IT TO HAVE ALLOWABLE SPACE TO LAY THE DERRICK OVER. REMOVED THE WINDWALLS, , UNPLUGGED ELECTRIC, TOOK OFF WIND BRACES, DISCONNECT IDM HYDRAULICS. RIGGED DOWN THE ELECTRIC IN THE DERRICK, LOADED PIPE OUT ON TRUCKS FOR INSPECTION, BLED RAM MAST, RIGGED DOWN HYDRAULIC WENCHES, MOVED PIPE TUB OUT OF THE WAY TO LAY OVER DERRICK, STARTED MUD PUMP INSPECTION @ 10:00 6/25/2015, FINISHED INSPECTION 17:00 A COUPLE OF BRACES NEED WELDED
	20:00 - 0:00	4.00	RIGINS	08	A	P	2484	REMOVE THE STRING UP LINE FROM THE BLOCKS AND PREP THE BLOCKS FOR REMOVAL AND REPLACEMENT, REMOVE THE BLOCKS AND ATTEMPT TO INSATLL THE NEW SET. NEW BLOCKS WERE INCORRECT AND INSTALLATION WAS STOPPED. PREPPED GEN #3 FOR REMOVAL AND REPAIR AT THE SHOP.
6/26/2015	0:00 - 2:00	2.00	RIGINS	08	A	P	2484	PREP GEN #3 FOR REMOVAL FOR THE MECHANICS
	2:00 - 6:00	4.00	RIGINS	08	A	P	2484	DRY WATCH AND WAIT ON DAYLIGHT
	6:00 - 0:00	18.00	RIGINS	08	A	P	2484	RIG INSPECTION MOVE DRIVE HOUSE TOPULL GEN #3, REST HOUSE AND START UP #2 FOR POWER, REMOVE/INSTALL HEADS,TURBO AND INJECTORS ON GEN #3. INSPECT HOPPER HOUSE AND MUD MANIFOLD AREA, RPEPLACED 5 VALVES INSPECTED THE DRAWORKS,BRAKES AND UPPER DERRICK. CLEANED THE DERRICK FOR INSPECTION CHANGED OUT A 6X5 TRANSFER PUMP REMOVE FLOWLINE FROM THE SHAKERS REMOVE POSSUM BELLYS TO PREP FOR SHAKER REPAIRS INSPECTED THE IDM WORK ON THE RISER IN THE PREMIX WELD CRACKS IN THE CROSSHEAD SLIDE INSPECTION WINDOW CLEAN GEAR ENDS ON THE PUMPS CLEAN EQUIPMENT FOR INSPECTIONS
6/27/2015	0:00 - 5:00	5.00	RIGINS	08	A	P	2484	WAIT ON DAYLIGHT FOR INSPECTIONS

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	5:00 - 22:00	17.00	RIGINS	08	A	P	2484	#1 GEN : REMOVED THE AIR DEFLECTOR, DRAINED RADIATOR. REMOVED RISER JACK ON THE PREMIX PIT REMOVED DERRICK SPREADER WITH A CRANE WELDED UP SMALL CRACK IN GUSSETS FROM THE DERRICK LEG TO CROWN SECTION STRAIGHTENED AND SECURED THE V-DOOR GATES MOVED THE PREMIX TANK TO FACILITATE REMOVAL THE RADIATOR, REPLACEMENT OF THE #1 GEN RADIATOR RIGGED DOWN THE DRIVE HOUSE TO RE-INSTALL GEN #3 INSTALLED GEN #3, SET THE DRIVE HOUSE BACK IN HOOKED UP POWER CORDS AND TESTED IT. CHANGED OIL IN GEN #3 SANDBLASTED AND INSPECTED TIE IN POINTS FOR THE DERRICK SWAPED OUT LOADERS CUT OUT AND REPLACED THE SHAKER SCREEN RAILS ON FIRST SHAKER SCREEN ON EACH SHAKER, RE-INSTALLED THE P-SEALS AND POSSUM BELLIES. ITEMS THAT WERE DONE OTHER THAN INSPECTION: LOADED PIPE TUBS TO BE TAKEN TO LA SALLE FOR DRILL PIPE SWAP TO 4.5" PIPE. SHIPPED THE TUBS TO LA SALLE EST MAN HOURS: 4 LOAD OUT THE C-CAN, HALF MOON TANK, RAMP, BIOCIDE TANK, NEWPARK MATTS, 1 SET PIPE RACKS TO PUT IN THE LAYDOWN YARD. EST. MAN HOURS 4
	22:00 - 0:00	2.00	RIGINS	08	A	P	2484	DRY WATCH UNTIL MORNING CREWS WORKING A STAGERED SHIFT FROM 06:00 - 22:00
6/28/2015	0:00 - 6:00	6.00	RIGINS	08	A	P	2484	WAIT ON DAYLIGHT AND CREWS
	6:00 - 9:00	3.00	RIGINS	08	A	P	2484	PREP AND INSTALL THE DERRICK SPREADER, INSTALL THE CROWN SALA BLOCK, REFILL GEN #1 RADIATOR

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	9:00 - 18:00	9.00	MIRU3	01	E	P	2484	RIG DOWN AND SET OUT THE BACK YARD CLEANING SKIDS WHILE RIGGING DOWN & SETTING BACK YARD OUT TO LOAD EMPTY BUILDINGS TO MAKE THE ROAD TRIP LOADED & SENT OUT 1 LOAD TO VERNAL WITH MISC. MATTS AND PIPING VAC OUT THE WATER TANK AND PIT (FROM WASHING) FOR THE MOVE HAD TRUCKING SERVICES PICK UP CONTAINMENTS WE HAD 9 MAN HOURS DURING THIS TIME FOR WORKING ON THE #1 GEN RADIATOR RW JONES: 1 FORKLIFT 4 HAUL TRUCKS 1 FLATBED 1 GIN TRUCK 1 SUPERVISOR 2 SWAMPERS ON LOCATION 07:30 - 16:30 TRUCKING SERVICES 1 SUPER SUCKER 2 POWER WASHERS 5 PERSONEL
	18:00 - 22:00	4.00	MIRU3	01	E	P	2484	UNLOAD THE PUSHER CAMP TO MOVE REPLACE AIR DEFLECTOR ON GEN #3 APP. 6 MAN HOURS
	22:00 - 0:00	2.00	MIRU3	21	C	P	2484	WAIT ON DAYLIGHT AND CREWS TO RIG DOWN AND MOVE EQUIPMENT
6/29/2015	0:00 - 6:00	6.00	MIRU3	21	C	P	2484	WAIT ON DAYLIGHT TO LOADOUT TRUCKS FOR RIG MOB

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Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	6:00 - 20:00	14.00	PRPSPD	01	A	P	2484	WE UNPINNED AND SPLIT THE DERRICK ALSO REMOVED THE RACKING FLOOR AND THE RIG FLOOR FOR TRANSPORT. DOLLIED UP THE DERRICK HALVES TO LOAD OUT. RIGGED DOWN THE DOGHOUSE AND SUB, SPLIT THE SUB, WASHED IT AND LOADED IT UP AND SHIPPED IT OUT. WE WASHED LOADED AND SHIPPED: 2 PUMPS, GENS, SHAKER PIT, COMBO HOUSE, WATER TANK 1 LOAD MATTS, MISC. EQUIPMENT. LOADED MORE EQUIPMENT AND TOOLS INTO THE C-CANS AND BASKET FOR SHIPPING WE HAVE APP. 20 LOADS LEFT TO SHIP WITH 5 OF THOSE BEING OVERSIZE. THOSE WILL SHIP AS SOON AS THE TRUCKS GET BACK FROM VERNAL APP EARLY TO MID AFTERNOON 6/30/15 APP 60% OF THE RIG IS SHIPPED ESTIMATED SHIPPING ON THE CROWN CLUSTER IS TUESDAY AND THE BLOCKS ON WEDNESDAY 16 HAUL TRUCKS 1 BED TRUCK 2 GIN TRUCKS 6 FLAGGERS 2 SWAMPERS 1 SUPERVISOR
	20:00 - 0:00	4.00	PRPSPD	21	C	P	2484	WAIT ON DAYLIGHT TO RESUMED MOB OPERATIONS
6/30/2015	0:00 - 6:00	6.00	PRPSPD	21	C	P	2484	WAIT ON DAYLIGHT TO LOAD OUT EQUIPMENT AND MOVE
	6:00 - 20:00	14.00	PRPSPD	01	A	P	2484	CONTINUED LOADING OUT EQUIPMENT AND TRUCKING IT TO VERNAL
	20:00 - 0:00	4.00	PRPSPD	21	C	P	2484	WAITING ON DAYLIGHT TO CONTINUE RIG MOB
7/1/2015	0:00 - 6:00	6.00	PRPSPD	21	C	P	2484	WAITING ON DAYLIGHT AND TRUCKS

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	6:00 - 18:00	12.00	PRPSPD	01	A	P	2484	WE HAD 8 LOADS LEAVE VERNAL TODAY MATS, FORKLIFT, RIG MANAGER CAMP, DOGHOUSE, RACKING FLOOR, C-CANS, PREMIX PIT IN VERNAL WE FINISHED SETTING MATTS, SET IN GENS, PUMPS, DRIVE HOUSE, SUB, BOP, WE TOOK DELIVERY OF THE 4 MUD UPRIGHTS, SST 57 C-CAN, RIGGED UP SOME PASON EQUIP,. THE DERRICK MADE IT INTO VERNAL THIS EVENING AND WILL BE ONSITE IN THE MORNING. THE BLOCKS AND CROWN CLUSTER WERE IN TRANSIT TO BE HERE TOMORROW WE WILL BE BRINGING IN SOLID CONTROL TOMORROW ALSO THE LAST OVERSIZE LOADS ARE IN TRANSIT RIG IS 40% ON LOCATION 20% RIGGED UP THERE ARE 13 LOADS INCLUDING THE PIPE BASKETS LEFT TO LEAVE PLATTVILLE AND CASPER THERE WAS SOME REPORTED DAMAGETO A BRACKET ON THE UPPER DERRICK SECTION DURING TRANSPORT. I WILL FILL A PROPERTY DAMAGE REPORT AS SOON AS WE KNOW THE EXTENT OF THE DAMAGE
	18:00 - 0:00	6.00	PRPSPD	21	C	P	2484	WAITING ON DAYLIGHT TO CONTINUE RIGGING UP
7/2/2015	0:00 - 7:00	7.00	PRPSPD	21	C	P	2484	WAIT ON DAYLIGHT
	7:00 - 20:00	13.00	PRPSPD	01	B	P	2484	SET DOGHOUSE, WINDWALLS, WE RECIEVED AND INSTALLED THE CROWN CLUSTER AND THE BLOCKS IN THE DERRICK RECIEVED AND INSTALLED THE RIG FLOOR AND RACKING FLOOR TO THE DERRICK PINNED THE DERRICK TO THE SUB AND INSTALLED THE RAMS PINNED THE DERRICK TOGETHER RECEIVED AND SET THE SOLIDS EQIPMENT IN PLACE FINISHED SETTING THE BACK YARD IN UNLOADED A 40' CONTAINER OF HANDRAILS, TOOLS, EQUIPMENT AND MISC. RIG PARTS RECIEVED AND SET IN THE ZECO HOUSING AND PUSHER CAMP INSTALLED PASON SYSTEM
	20:00 - 0:00	4.00	PRPSPD	21	C	P	2484	WAITING ON DAYLIGHT TO RESUME RIGGING UP
7/3/2015	0:00 - 6:00	6.00	PRPSPD	21	C	P	2484	WAIT ON DAYLIGHT
	6:00 - 16:00	10.00	PRPSPD	01	B	P	2484	RAN THE STRING UP LINE IN THE DERRICK, RIGGED UP HYDRAULIC AND ELECTRIC LINES IN THE DERRICK, REPLACE RACKING BOARD BRACE THAT WAS DAMAGED ON THE RIG MOVE, RAISED THE DERRICK, LOWERED THE RACKING BOARD, PREPPED THE DERRICK FOR STRING UP. EPTIED ALL CONTENTS FROM THE C-CAN. INSPECTED PRE MIX AND WATER TANK THEN FILLED THEM WITH WATER

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	16:00 - 19:00	3.00	PRPSPD	08	A	Z	2484	WE HAD A FIRE ON THE NUMBER 3 GEN. I WAS TALKING TO THE RIG MANAGER BY THE SUB WHEN WE NOTICED SMOKE FIRST THEN FIRE COMING FROM THE GEN HOUSE. THE FIRE WAS EXTINGUISHED BUT IT HAD DAMAGED THE FRONT ENGINE COMPONENTS. WE HELD A SAFETY MEETING AND HAD A FIRE WATCH TO MAKE SURE IT DID NOT REIGNITE. THIS WAS THE SAME GEN THAT JUST HAD A TOP END DONE LAST WEEK
	19:00 - 0:00	5.00	PRPSPD	01	B	P	2484	FINISHED PREPING TO STRING UP, STRING UP , PICKED UP THE BOP AND WALKED THE RIG BACK TO POSITION #1
7/4/2015	0:00 - 6:00	6.00	PRPSPD	21	C	P	2484	WAITING ON DAYLIGHT
	6:00 - 7:30	1.50	PRPSPD	01	B	P	2484	WE SET TEH CATWALK, MOVED THE EXTRA MATTS, REMOVE EQUIPMENT FROM JUNK TUB THAT ARRIVED
	7:30 - 18:00	10.50	PRPSPD	08	A	Z	2484	PULLED CORDS FROM THE DRIVE HOUSE, PUMPED WATER FROM WATER TANK, PUSHED WATER TANK BACK, PULLED THE DRIVE HOUSE FORWARD. PREPPED THE GENERATOR FOR REMOVAL. PULLED THE DAMAGED GENERATOR. PREPPED THE NEW GEN FOR INSTALLATION, HAD TO INSTALL RADIATOR, GUARDS, BRACES AND INTERCOOLER *** WE HAD 10 MAN HOURS USED RIGGING UP AND GETTING LINES OUT FROM TUBS DURING THE RIG REPAIR
	18:00 - 0:00	6.00	PRPSPD	01	B	P	2484	RIGGING UP THE STANDPIPE, MUD LINES, FLOOR AND FLOWLINE
7/5/2015	0:00 - 9:30	9.50	PRPSPD	01	B	P	2484	RIG UP FLOOR, DOORS, FLOOR MATS, RAM COVERS, STANDPIPE, FLOWLINE, POP OFF LINES, KOOMY LINES, GAS BUSTER RAM COVERS, INSTALL SOME PASON LINES, INSTALL FISHER PUMP, GET ELEVATORS AND SLIPS OUT OF THE PIPE TUBB
	9:30 - 10:45	1.25	PRPSPD	23		P	2484	PRE SPUD INSPECTION: FOUND A FEW LOOSE UNIONS TO TIGHTEN UP, ONE CHAIN MISSING ON FLOW LINE, PUMPS WOULD NOT PRIME AND WE HAD TO GET THEM GOING.
	10:45 - 17:15	6.50	CSGSUR	14	A	P	2484	INSTALLED AND NIPPLED UP THE BOP, CHOKE AND KILL LINE, KOOMY LINE, DRILLING HEAD, INSTALLED THE FLOW LINE UNDER THE SUB THE CHOKE VALVE ASSY HAD TO BE TAKEN OFF THE OLD MUD CROSS AND REINSTALLED ON THE CAMERON MUD CROSS.
	17:15 - 18:45	1.50	CSGSUR	14	B	P	2484	INSTALL THE ELEVATORS AND CHANGE OUT ELEVATORS INSERTS, SAVER SUB TO PRESSURE TEST

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	18:45 - 23:15	4.50	CSGSUR	15	A	P	2484	SAFETY MEETING WITH CREW, TEST BOP WITH A-1 TESTERS FIRST TEST FAILED AND WE HAD TO HAMMER UP THE BOLTS ON THE WELLHEAD ADAPTER THAT WAS INSTALLED BY CAMERON PRIOR TO RIGGING UP TEST ANNULAR TO 250 PSI LOW/ 5 MIN 3000 PSI HIGH 10 MIN, PIPE & BLIND RAMS, FLOOR VALVES, IBOP, HCR VALVE, KILL LINE VALVES, TEST BOPS, CHOKE MANIFOLD TO 250 PSI LOW / 5 MIN - 5000 PSI HIGH / 10 MIN, HOLD ACCUMULATOR FUNCTION TEST, TEST CSG 1500 PSI - 30 MIN
	23:15 - 0:00	0.75	CSGSUR	15	A	P	2484	TEST THE SURFACE CASING TO 1500 PSI FOR 30 MINUTES
7/6/2015	0:00 - 0:30	0.50	CSGSUR	15	A	P	2484	RIG DOWN THE PRESSURE TESTER
	0:30 - 0:45	0.25	CSGSUR	14	B	P	2484	INSTALL THE WEAR BUSHING
	0:45 - 4:45	4.00	CSGSUR	01	B	P	2484	SET THE MANIFOLD AND STRING HOSES TO THE MUD FARM TANKS, COUNT DRILL PIPE THAT CAME IN DURING THE LATE NIGHT, LOAD BHA AND STRAP IT, PREP FLOOR TO TRIP
	4:45 - 6:45	2.00	CSGSUR	06	A	P	2484	PICK UP AND SCRIBE THE BHA
	6:45 - 7:15	0.50	CSGSUR	07	A	P	2484	INSPECT THE IDM, CHECK SCREEN POTS
	7:15 - 8:00	0.75	CSGSUR	08	A	Z	2484	INSPECTED THE PASON EQUIPMENT (WOULD NOT TRACK BIT DEPTH) CALLED PASON FOR PARTS
	8:00 - 8:45	0.75	CSGSUR	06	A	P	2484	PICKED UP DRILL PIPE
	8:45 - 9:45	1.00	CSGSUR	08	A	Z	2484	CHANGE CORD IN THE DERRICK AND CHANGE OUT THE EYE AT THE CROWN
	9:45 - 14:45	5.00	CSGSUR	06	A	P	2484	WE TRIPPED IN THE HOLE WITH PIPE TO 2215' SHALLOW MWD TEST WAS GOOD INSTALLED THE ROTATING HEAD AND FILLED PIPE
	14:45 - 17:00	2.25	DRLPRC	02	F	P	2484	DRILLED THE SHOE TRACK 94 STKS. 360 GPM 25 RPM ROTARY 5-8K WEIGHT ON BIT
	17:00 - 0:00	7.00	DRLPRC	02	D	P	2484	DIRECTIONAL DRILL 7.875 HOLE F/ 2484' TO 3351/ 867'/4.3 HR @ 201.6'/ PH WEIGHT ON BIT = 18 - 24 K STROKES PER MINUTE 2 PUMPS @158 GALLONS PER MINUTE = 600 MUD MOTOR RPM =84 TOP DRIVE RPM = 57 - 84 TOTAL RPM = 141 FT/LBS TORQUE = 9 - 19K STPP = 1850 STAND OFF BOTTOM = 1530 14' Above / 2' Right. Slide 137' @ 16% = 1.75 Hrs Rot 724' @ 94% = 4.75 Hrs STRING WEIGHT UP/DOWN/ROTATING = 108K / 90K / 99 HOLE IN GOOD CONDITION ZECO - DEWATERING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 8.5 PPG VISCOSITY = 26 SECONDS DRILLING WITH GYPSUM SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB

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Active datum: RKB @5,150.00usft (above Mean Sea Level)	UWI: NE/NE/0/10/S/22/E/9/0/0/26/PM/N/412/E/0/517/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
7/7/2015	0:00 - 11:30	11.50	DRLPRC	02	C	P	3351	DIRECTIONAL DRILL 7.875 HOLE F/3351- 4785' (1434'/ 7.5 HR @ 191.2'/ PH) TOTAL BIT HOURS 11.6 WEIGHT ON BIT = 18 - 24 K STROKES PER MINUTE 2 PUMPS @158 GALLONS PER MINUTE = 600 MUD MOTOR RPM =84 TOP DRIVE RPM = 57 - 84 TOTAL RPM = 141 FT/LBS TORQUE = 9 - 12K SPP = 2250 PSI / OFF BOTTOM = 1900 PSI 9' North / 6' West PU / SO / ROT = 160K / 95K / 120 HOLE IN GOOD CONDITION ZECO - DEWATERING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 8.5 PPG VISCOSITY = 26 SECONDS DRILLING WITH GYPSUM SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	11:30 - 21:15	9.75	DRLPRO	02	B	P	4785	DRILL VERTICAL 7.875 HOLE F/ 4785' TO 6332 (1547'/ 6.5 HR @238 '/ PH) TOTAL BIT HOURS 18.1 WEIGHT ON BIT = 18 - 24 K SPM - 2 PUMPS @158 GALLONS PER MINUTE = 600 MUD MOTOR RPM =84 TOP DRIVE RPM = 57 - 84 TOTAL RPM = 141 FT/LBS TORQUE = 10 - 13K STPP = 2500 PSI OFF BOTTOM = 2112 PSI 14’ North / 8’ West of center target MW 8.5 Slide 153’ @ 8.52% = 2.5 Hrs Rot 2370’ @ 91.47% = 12.75 Hrs PU / SO / ROT = 185K / 110 K / 120 K HOLE IN GOOD CONDITION ZECO - DEWATERING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 8.5 PPG VISCOSITY = 26 SECONDS DRILLING WITH GYPSUM SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	21:15 - 21:30	0.25	DRLPRO	07	A	P	6332	RIG SERVICE

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-9B4BS RED		Spud date: 6/3/2015	
Project: UTAH-UINTAH	Site: NBU 1022-9A PAD		Rig name no.: PROPETRO 12/12, ENSIGN 145/145
Event: DRILLING	Start date: 6/3/2015		End date: 7/11/2015
Active datum: RKB @5,150.00usft (above Mean Sea Level)	UWI: NE/NE/0/10/S/22/E/9/0/0/26/PM/N/412/E/0/517/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	21:30 - 0:00	2.50	DRLPRO	02	A	P	6332	DRILL VERTICAL 7.875 HOLE F/ 6332 TO 6610' (278'/ 1.5 HR @238 / PH) TOTAL BIT HOURS 23 WEIGHT ON BIT = 18 - 24 K STROKES PER MINUTE 2 PUMPS @158 GALLONS PER MINUTE = 600 MUD MOTOR RPM =84 TOP DRIVE RPM = 57 - 84 TOTAL RPM = 141 FT/LBS TORQUE = 10 - 13K STPP = 2500 STAND OFF BOTTOM = 2112 MW 8.7 PU / SO / ROT = 185K / 110 K / 120 K HOLE IN GOOD CONDITION ZECO - DEWATERING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 9.3 PPG VISCOSITY = 36 SECONDS DRILLING WITH GYPSUM SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
7/8/2015	0:00 - 0:30	0.50	DRLPRO	02	B	P	6610	DRILL VERTICAL 7.875 HOLE F/ 6610' 6695 (85'/ 5 HR @170/ PH) TOTAL BIT HOURS 20.1 WEIGHT ON BIT = 18 - 24 K STROKES PER MINUTE 2 PUMPS @158 GALLONS PER MINUTE = 600 MUD MOTOR RPM =84 TOP DRIVE RPM = 57 - 84 TOTAL RPM = 141 FT/LBS TORQUE = 10 - 13K STPP = 2500 STAND OFF BOTTOM = 2112 MW 8.7 PU / SO / ROT = 185K / 110 K / 120 K HOLE IN GOOD CONDITION ZECO - DEWATERING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 8.5 PPG VISCOSITY = 26 SECONDS DRILLING WITH GYPSUM SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-9B4BS RED		Spud date: 6/3/2015	
Project: UTAH-UINTAH	Site: NBU 1022-9A PAD		Rig name no.: PROPETRO 12/12, ENSIGN 145/145
Event: DRILLING	Start date: 6/3/2015		End date: 7/11/2015
Active datum: RKB @5,150.00usft (above Mean Sea Level)	UWI: NE/NE/0/10/S/22/E/9/0/0/26/PM/N/412/E/0/517/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	0:30 - 4:15	3.75	DRLPRO	22	N	X	6695	ENCOUNTERED 20 BBLS GAIN/ SHUT IN WELL @ 00:26 THE WELL WAS OPENED BACK UP@ 00:30 PUMPS BROUGHT ON TO 618 GPM TOTAL GAIN DROPPED TO 14 BARREL AND SEEMED TO BE SEMI STABLE AT 00:42 A GAIN WAS SEEN AGAIN AND THE ORDER GIVEN TO SHUT IT IN WITH 23 BBL. GAIN PUMPS WERE DOWN @ 00:46 AND THE BAG CLOSED WITH A 37 BBL. GAIN THE CHOKE WAS CLOSED IN BY 00:47 , TOTAL GAIN 60BBL. (INCLUDING GAS BUSTER DRAINING) SHUT IN PRESSURE WAS MONITORED WHILE CALLING LOVEL, MOE, ED AND ZACH. THE DECISION WAS MADE TO USE SOME OF THE HEAVY MUD AND BLEND THE SYSTEM UP TO KILL WT. CURRENT MW 8.7 THE FLOAT WAS BUMPED AND WE RECORDED 150 SPP AND 435 SICP WHILE RUNNING THE KILL SHEET WE TRANSFERED FLUID FROM THE PIT AND BROUGHT 12# MUD TO THE SUCTION TO BLEND IT INTO THE SYSTEM. CALCULATED 9.2# MUD NEEDED AND ICP 478 PSI KW FLUID WAS CIRCULATED TO SURFACE, THE CHOKE CLOSED 0 PSI SICP, 0 PSI SIDPP. THE WELL WAS OPENED UP - NO FLOW. BROUGHT THE PUMPS BACK ONLINE AND MOVED THE PIPE TO CHECK FOR STUCK PIPE THEN WENT BACK TO DRILLING EACH TIME THE PUMPS ARE CYCLED THERE IS A 12 BBL. GAIN/ LOSS SEEN ON PASON WHEN THE PUMPS ARE SHUT DOWN WHILE ON THE BUSTER FOR AN AMOUNT OF TIME.THERE IS A 25 BARREL GAIN IT WAS SHUT IN THE
	4:15 - 8:15	4.00	DRLPRO	02	B	P	6695	DRILL VERTICAL 7.875 HOLE F/ ' 6695 TO 7058 (336'/ 90.75 HR @/ PH) TOTAL BIT HOURS 23. WEIGHT ON BIT = 18 - 24 K STROKES PER MINUTE 2 PUMPS @158 GALLONS PER MINUTE = 600 MUD MOTOR RPM =84 TOP DRIVE RPM = 57 - 84 TOTAL RPM = 141 FT/LBS TORQUE = 10 - 13K STPP = 2500 STAND OFF BOTTOM = 2112 MW 8.7 PU / SO / ROT = 195K / 188 K / 140 K HOLE IN GOOD CONDITION ZECO - DEWATERING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 9.3 PPG VISCOSITY = 26 SECONDS DRILLING WITH GYPSUM SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	8:15 - 8:45	0.50	DRLPRO	07	A	P	7058	RIG SER.

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-9B4BS RED		Spud date: 6/3/2015	
Project: UTAH-UINTAH	Site: NBU 1022-9A PAD		Rig name no.: PROPETRO 12/12, ENSIGN 145/145
Event: DRILLING	Start date: 6/3/2015		End date: 7/11/2015
Active datum: RKB @5,150.00usft (above Mean Sea Level)	UWI: NE/NE/0/10/S/22/E/9/0/0/26/PM/N/412/E/0/517/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	8:45 - 18:00	9.25	DRLPRO	02	B	P	7058	DRILL VERTICAL 7.875 HOLE F/ 7058 TO 7914 (856 '/ 7.3 HR @ 117.26/ PH) TOTAL BIT HOURS 30.3. WEIGHT ON BIT = 18 - 24 K STROKES PER MINUTE 2 PUMPS @158 GALLONS PER MINUTE = 600 MUD MOTOR RPM =84 TOP DRIVE RPM = 57 - 84 TOTAL RPM = 141 FT/LBS TORQUE = 10 - 13K STPP = 2500 STAND OFF BOTTOM = 2112 MW 8.7 PU / SO / ROT = 198K / 114 K / 148 K 12.3' North / 2.6' West of center target) Slide 17' @ 4.6% = .42 Hrs / Rot 347' @ 95.4% = 3.42 Hrs HOLE IN GOOD CONDITION ZECO - DEWATERING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 9.3 PPG VISCOSITY = 39 SECONDS DRILLING WITH GYPSUM SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	18:00 - 0:00	6.00	DRLPRO	02	B	P	7914	DRILL VERTICAL 7.875 HOLE F/ 7914 TO 8420 (506 '/ 4.3 HR @ 117.67 PH) TOTAL BIT HOURS 34.6. WEIGHT ON BIT = 18 - 24 K STROKES PER MINUTE 2 PUMPS @158 GALLONS PER MINUTE = 600 MUD MOTOR RPM =84 TOP DRIVE RPM = 57 - 84 TOTAL RPM = 141 FT/LBS TORQUE = 14 - 17K STPP = 3005 STAND OFF BOTTOM = 2700 MW 9.5 PU / SO / ROT = 220K / 135 K / 155 K 19' North / 7' West of center target Slide 37' @ 2.7% = 1.58 Hrs / Rot 1324' @ 97.3% = 12.33 Hrs HOLE IN GOOD CONDITION ZECO - DEWATERING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 9.5 PPG VISCOSITY = 39 SECONDS DRILLING WITH GYPSUM SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-9B4BS RED		Spud date: 6/3/2015	
Project: UTAH-UINTAH	Site: NBU 1022-9A PAD		Rig name no.: PROPETRO 12/12, ENSIGN 145/145
Event: DRILLING	Start date: 6/3/2015		End date: 7/11/2015
Active datum: RKB @5,150.00usft (above Mean Sea Level)	UWI: NE/NE/0/10/S/22/E/9/0/0/26/PM/N/412/E/0/517/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
7/9/2015	0:00 - 1:00	1.00	DRLPRO	02	B	P	8420	DRILL VERTICAL 7.875 HOLE F/ 8420 - 8506' (86 '/ .7 HR @ 122.8 PH) TOTAL BIT HOURS 34.6. WEIGHT ON BIT = 18 - 24 K STROKES PER MINUTE 2 PUMPS @158 GALLONS PER MINUTE = 600 MUD MOTOR RPM =84 TOP DRIVE RPM = 57 - 84 TOTAL RPM = 141 FT/LBS TORQUE = 14 - 17K STPP = 3005 STAND OFF BOTTOM = 2700 MW 9.5 PU / SO / ROT = 220K / 135 K / 155 K 19' North / 7' West of center target HOLE IN GOOD CONDITION ZECO - DEWATERING CENTRIFUGE - RUNNING DE-SANDER - RUNNING MUD WEIGHT = 9.5 PPG VISCOSITY = 39 SECONDS DRILLING WITH GYPSUM SYSTEM MIXING HIGH VISCOSITY SWEEPS WITH CALCARB
	1:00 - 3:15	2.25	DRLPRO	05	G	P	8506	STOPPED TO WORK THE PIPE AND DISPLACE THE MUD SYSTEM DISPLACED 9.5 MUD IN THE ACTIVE WITH 11.8 MUD WITH 8-10% LCM (CEDAR FIBER AND MULTI SEAL) FROM STORAGE WE LOST APPOX. 40 BBL. MUD ON DISPLACEMENT TO THE HEAVY MUD.
	3:15 - 13:45	10.50	DRLPRO	02	B	P	8506	DRILL VERTICAL 7.875 HOLE F/ 8506'- 9015' (509 '/ 9.2 HR @ 55.3' PH) TOTAL BIT HOURS 43.8. WEIGHT ON BIT = 18 - 24 K STROKES PER MINUTE 2 PUMPS @ 118 GALLONS PER MINUTE = 452 MUD MOTOR RPM =63 TOP DRIVE RPM = 54-57 TOTAL RPM = 120 FT/LBS TORQUE = 14 - 17K STPP = 2560 STAND OFF BOTTOM = 2300 PU / SO / ROT = 220K / 133 K / 155 K 19' North / 7' West of center target HOLE IN GOOD CONDITION ZECO - CENTRIFUGE - RUNNING AS NEEDED DE-SANDER - RUNNING MW 11.4 raised to 11.8 AT TD / VIS 39 SECONDS
	13:45 - 15:15	1.50	CSGPRO	05	C	P	9015	CIRCULATE 2 BOTTOMS UP TO CLEAN THE HOLE ROCIPRICATE AND ROTATE THE PIPE
	15:15 - 17:00	1.75	CSGPRO	06	E	P	9015	FLOW CHECK - NO FLOW WE MADE A 10 STAND WIPER TRIP MAX STRAIGHT PULL 265K PULL WEIGHT 235K RETURNED TO BOTTOM NO FILL
	17:00 - 18:30	1.50	CSGPRO	05	C	P	9015	CIRCULATE 2 BOTTOMS UP TO CLEAN THE HOLE ROCIPRICATE AND ROTATE THE PIPE
	18:30 - 21:30	3.00	CSGPRO	06	A	P	9015	TOH TO RUN 4.5 CASING
	21:30 - 23:00	1.50	CSGPRO	03	B	P	9015	WORK TIGH SPOT @ 4406' WORKING UNTILL CLEAN UP
	23:00 - 23:15	0.25	CSGPRO	06	A	P	9015	TOH F/ 4345 TO 4047
	23:15 - 0:00	0.75	CSGPRO	03	B	P	9015	4406,4047 TO 4040WORK TIGHT HOLE @ 4047 TO 4040 WORKED UNTILL CLEANED UP

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-9B4BS RED		Spud date: 6/3/2015	
Project: UTAH-UINTAH	Site: NBU 1022-9A PAD		Rig name no.: PROPETRO 12/12, ENSIGN 145/145
Event: DRILLING	Start date: 6/3/2015		End date: 7/11/2015
Active datum: RKB @5,150.00usft (above Mean Sea Level)	UWI: NE/NE/0/10/S/22/E/9/0/0/26/PM/N/412/E/0/517/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
7/10/2015	0:00 - 0:15	0.25	CSGPRO	03	A	P	9015	BACK REAM 4047' - 4040'
	0:15 - 4:00	3.75	CSGPRO	06	A	P	9015	TRIP OUT OF THE HOLE WITH THE DRILL STRING DRAIN THE DOIRECTIONAL ASSY AND RACK IT BACK IN THE DERRICK CALC FILL 59.7 BBL. ACTUAL FILL 55.2
	4:00 - 4:30	0.50	CSGPRO	14	B	P	9015	PULL THE WEAR BUSHING
	4:30 - 6:00	1.50	CSGPRO	12	A	P	9015	CLEAR THE FLOOR FOR CASING RUN AND HOLD A SAFETY MEETING WITH FRANKS CASING CREW FOR RIGGING UP EQUIPMENT
	6:00 - 7:00	1.00	CSGPRO	12	A	P	9015	RIGGED UP THE CASING CREW AND HELD A CASING RUN PRE JOB MEETING
	7:00 - 17:30	10.50	CSGPRO	12	C	P	9015	RAN THE FLOAT EQUIPMENT AND PUMPED THROUGH IT- OK RAN 18 MORE JOINTS WITH A COLLAR CLAMP THEN FILLED THE PIPE RAN CASING TO THE SURFACE SHOE AND FILLED THE PIPE RAN CASING TO 5000' AND FILLED PIPE RUN CASING TO BOTTOM AS PER ENSIGN POLICY THE RUN RATE ON TUBULARS IS : 150'/HR IN CASED HOLE AND 120'/HR IN OPEN HOLE RAN TOTAL OF 211 JOINTS OF 4.5" I-80 CASING = (96 JOINTS 4.5" / 11.6# I-80 / LTC CASING + 1- MARKER JOINT) + (113 JOINTS 4.5" / 11.6# I-80 / DQX CASING + 1- CROSS OVER) LANDED AT 8997.74', SHOE @ 8996.24', FLOAT COLLAR @ 8956.061', MESA VERDE MARKER @ 6839.12', CROSS OVER @ 4993.99' I-80 JOINTS LEFT OUT: 7- 4.5" LTC 5 - 4.5" DQX 1 - 4.5" CROSS OVER 3 - 4.5" MARKER JOINTS
	17:30 - 19:00	1.50	CSGPRO	05	A	P	9015	CIRC.4.5 CASING ON BOTTOM SPM - 77 SPP - 515 GPM - 295

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-9B4BS RED		Spud date: 6/3/2015	
Project: UTAH-UINTAH	Site: NBU 1022-9A PAD		Rig name no.: PROPETRO 12/12, ENSIGN 145/145
Event: DRILLING	Start date: 6/3/2015		End date: 7/11/2015
Active datum: RKB @5,150.00usft (above Mean Sea Level)	UWI: NE/NE/0/10/S/22/E/9/0/0/26/PM/N/412/E/0/517/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	19:00 - 22:00	3.00	CSGPRO	12	E	P	9015	PRESSURE TEST TO 5000 PSI. PUMP 20 BBLS OF RED DYE SPACER, FOLLOWED BY 10 BBL. GEL SPACER, . DROPPED THE BOTTOM PLUG AND PUMPED 180 BBLS (515 SX) OF CLASS G LEAD CEMENT, 13 PPG 1.96 YLD,.1% BWOC SA-1015 + 6% BWOC BENTONITE + 0.4% BWOC HALAD +3 lbm SILICALITE + .25 #/SK POLY FLAKE + 0.25 #/SK KWIK SEAL +1#/SK GRANULITE TR , 10.46 GL./SK FRESH WATER . FOLLOWED BY 249 BBLS (1165 SX) OF 14.3#, 1.2 YLD. CLASS F POZ TAIL CEMENT + 0.20% BWOC SUPER CBL + 2% BWOC HALLIBURTON GEL +0.20% BWOC HR-5 + 0.50 BWOC HALAD 344 + 1 #/SK GRANULITE + .25 #/SK KWIK SEAL + 5.14 GL/SK FRESH WATER . SHUT DOWN AND DROP PLUG AND DISPLACE W/ 139 BBLS OF FRESH WATER. FULL RETURNS WITH 30 BBLS OF SPACER RETURNED TO SURFACE. NO CMT LIFT PSI OF 2600 / 3100 BUMP PLUG PSI. . PRESSURE HELD 5 MINS. FLOAT HELD. FLOW BACK 2.5 BBLS. EST. TOC FOR LEAD 13', EST TOC OF TAIL CEMENT 3980'.
	22:00 - 22:45	0.75	RDMO	12	B	P	9015	RIG DOWN CEMENT EQUIPMENT
	22:45 - 0:00	1.25	RDMO	12	B	P	9015	SET PACK OFF WITH CAMERON HAND , CLEAN PITS, NIPPLE DOWN BOPS, RIG RELEASED @ 23:59 7/10/2015

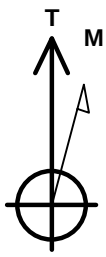
RECEIVED: Oct. 23, 2015

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9A PAD
Well: NBU 1022-9B4BS
Wellbore: OH
Design: OH

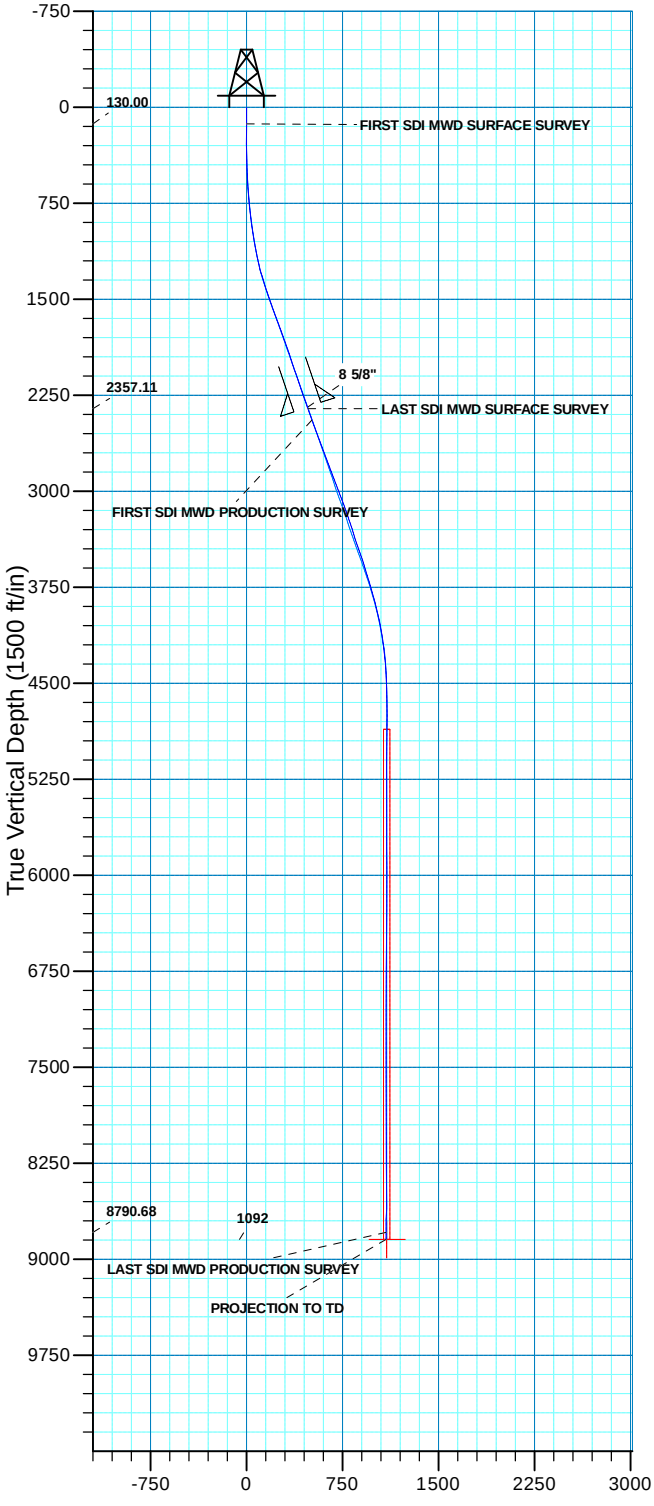
Anadarko Petroleum Corporation

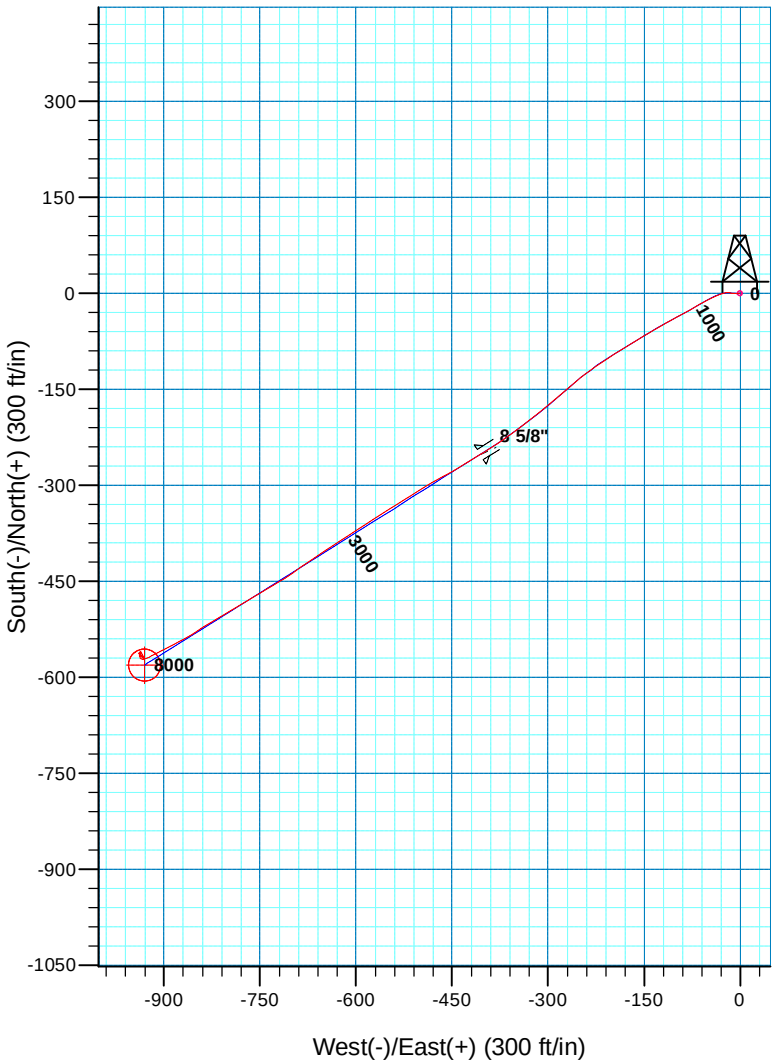
WELL DETAILS: NBU 1022-9B4BS					
GL 5137 & KB 13 @ 5150.00ft (ENSIGN 145)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14518847.11	2078482.30	39.9696890	-109.4365310



Azimuths to True North
Magnetic North: 10.67°

Magnetic Field
Strength: 51781.0snT
Dip Angle: 65.74°
Date: 6/28/2015
Model: BGGM2014





PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N	
Geodetic System:	Universal Transverse Mercator (US Survey Feet)
Datum:	NAD 1927 (NADCON CONUS)
Ellipsoid:	Clarke 1866
Zone:	Zone 12N (114 W to 108 W)
Location:	SECTION 9 T10S R22E
System Datum:	Mean Sea Level

Design: OH (NBU 1022-9B4BS/OH)
Created By: RobertScott Date: 10:32, July 13 2015

REC

Scientific Drilling

SDI
Survey Report

Anadarko Petroleum Corporation

Company:	US ROCKIES REGION PLANNING	**Local Co-ordinate Reference:**	Well NBU 1022-9B4BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**TVD Reference:**	GL 5137 & KB 13 @ 5150.00ft (ENSIGN 145)
Site:	NBU 1022-9A PAD	**MD Reference:**	GL 5137 & KB 13 @ 5150.00ft (ENSIGN 145)
Well:	NBU 1022-9B4BS	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	Denver Sales Office

Project UTAH - UTM (feet), NAD27, Zone 12N

Map System:	Universal Transverse Mercator (US Survey Feet)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 12N (114 W to 108 W)		

Site NBU 1022-9A PAD, SECTION 9 T10S R22E

Site Position:		**Northing:**	14,518,876.37 usft	**Latitude:**	39.9697680
From:	Lat/Long	**Easting:**	2,078,509.53 usft	**Longitude:**	-109.4364320
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	1.00 °

Well NBU 1022-9B4BS, 412 FNL 517 FEL

Well Position	**+N/-S**	0.00 ft	**Northing:**	14,518,847.12 usft	**Latitude:**	39.9696890
	+E/-W	0.00 ft	**Easting:**	2,078,482.29 usft	**Longitude:**	-109.4365310
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	0.00 ft	**Ground Level:**	5,137.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	6/28/2015	10.67	65.74	51,781

Design OH

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	238.16

Survey Program **Date** 7/13/2015

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
9.00	2,429.00	Survey #1 SDI MWD SURFACE (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1
2,521.00	9,015.00	Survey #2 SDI MWD PRODUCTION (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9.00	0.00	0.00	9.00	0.00	0.00	0.00	0.00	0.00	0.00
130.00	0.35	98.39	130.00	-0.05	0.37	-0.28	0.29	0.29	0.00
FIRST SDI MWD SURFACE SURVEY									
159.00	0.53	100.85	159.00	-0.09	0.58	-0.45	0.62	0.62	8.48
187.00	0.35	83.36	187.00	-0.11	0.80	-0.62	0.80	-0.64	-62.46
216.00	0.18	71.76	216.00	-0.08	0.93	-0.75	0.61	-0.59	-40.00
241.00	0.44	27.73	241.00	0.02	1.01	-0.87	1.34	1.04	-176.12
267.00	0.35	295.62	267.00	0.14	0.99	-0.91	2.20	-0.35	-354.27
295.00	0.68	284.00	295.00	0.22	0.75	-0.75	1.23	1.18	-41.50

RECEIVED: Oct. 23, 2015

Scientific Drilling

SDI

Survey Report

Anadarko Petroleum Corporation

Company:	US ROCKIES REGION PLANNING	**Local Co-ordinate Reference:**	Well NBU 1022-9B4BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**TVD Reference:**	GL 5137 & KB 13 @ 5150.00ft (ENSIGN 145)
Site:	NBU 1022-9A PAD	**MD Reference:**	GL 5137 & KB 13 @ 5150.00ft (ENSIGN 145)
Well:	NBU 1022-9B4BS	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	Denver Sales Office

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
325.00	1.06	252.20	324.99	0.17	0.31	-0.35	2.00	1.27	-106.00
354.00	1.55	264.94	353.98	0.06	-0.34	0.26	1.95	1.69	43.93
381.00	1.54	260.14	380.97	-0.04	-1.06	0.92	0.48	-0.04	-17.78
411.00	2.14	264.33	410.96	-0.16	-2.01	1.79	2.05	2.00	13.97
441.00	2.47	259.05	440.93	-0.34	-3.20	2.90	1.31	1.10	-17.60
471.00	3.17	269.95	470.90	-0.46	-4.67	4.21	2.93	2.33	36.33
501.00	3.61	271.74	500.85	-0.44	-6.44	5.70	1.51	1.47	5.97
531.00	3.54	275.20	530.79	-0.32	-8.31	7.23	0.76	-0.23	11.53
561.00	3.96	277.51	560.72	-0.10	-10.26	8.77	1.49	1.40	7.70
591.00	3.94	281.42	590.65	0.24	-12.29	10.32	0.90	-0.07	13.03
621.00	4.22	278.04	620.58	0.59	-14.40	11.92	1.23	0.93	-11.27
651.00	4.40	273.56	650.49	0.82	-16.64	13.70	1.27	0.60	-14.93
681.00	4.88	271.82	680.39	0.93	-19.06	15.70	1.67	1.60	-5.80
711.00	5.10	265.65	710.28	0.87	-21.67	17.95	1.93	0.73	-20.57
741.00	5.19	257.12	740.16	0.47	-24.32	20.41	2.56	0.30	-28.43
771.00	5.98	255.89	770.02	-0.22	-27.16	23.18	2.66	2.63	-4.10
801.00	6.23	252.52	799.85	-1.09	-30.23	26.25	1.46	0.83	-11.23
890.00	7.65	244.82	888.19	-5.06	-40.20	36.81	1.90	1.60	-8.65
980.00	8.71	240.69	977.28	-10.94	-51.56	49.57	1.35	1.18	-4.59
1,070.00	9.94	240.77	1,066.09	-18.07	-64.28	64.14	1.37	1.37	0.09
1,160.00	11.61	240.36	1,154.50	-26.34	-78.93	80.95	1.86	1.86	-0.46
1,250.00	13.45	240.95	1,242.35	-35.91	-95.95	100.46	2.05	2.04	0.66
1,340.00	16.09	241.92	1,329.37	-46.86	-116.11	123.36	2.95	2.93	1.08
1,430.00	17.76	238.75	1,415.47	-59.85	-138.85	149.53	2.12	1.86	-3.52
1,520.00	19.01	238.62	1,500.87	-74.61	-163.10	177.92	1.39	1.39	-0.14
1,611.00	19.35	237.61	1,586.82	-90.40	-188.49	207.81	0.52	0.37	-1.11
1,701.00	21.28	237.43	1,671.22	-107.18	-214.84	239.05	2.15	2.14	-0.20
1,791.00	20.66	231.98	1,755.27	-125.75	-241.12	271.17	2.27	-0.69	-6.06
1,881.00	18.30	229.65	1,840.11	-144.68	-264.40	300.94	2.76	-2.62	-2.59
1,971.00	19.79	228.73	1,925.18	-163.88	-286.62	329.94	1.69	1.66	-1.02
2,061.00	19.26	232.78	2,010.01	-182.91	-309.89	359.75	1.61	-0.59	4.50
2,151.00	20.31	231.92	2,094.70	-201.52	-334.00	390.06	1.21	1.17	-0.96
2,241.00	19.43	232.75	2,179.34	-220.22	-358.22	420.49	1.03	-0.98	0.92
2,331.00	18.64	237.17	2,264.42	-237.08	-382.22	449.78	1.83	-0.88	4.91
2,429.00	19.26	238.14	2,357.11	-254.10	-409.11	481.60	0.71	0.63	0.99
LAST SDI MWD SURFACE SURVEY									
2,521.00	19.55	238.67	2,443.88	-270.12	-435.14	512.16	0.37	0.32	0.58
FIRST SDI MWD PRODUCTION SURVEY									
2,611.00	19.12	241.65	2,528.81	-284.94	-460.98	541.93	1.20	-0.48	3.31
2,702.00	20.68	240.21	2,614.37	-300.01	-488.04	572.87	1.80	1.71	-1.58
2,793.00	20.93	238.73	2,699.44	-316.43	-515.88	605.18	0.64	0.27	-1.63
2,883.00	21.37	237.04	2,783.38	-333.69	-543.38	637.65	0.84	0.49	-1.88
2,974.00	21.37	237.21	2,868.12	-351.69	-571.23	670.80	0.07	0.00	0.19

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Scientific Drilling

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Survey Report

Anadarko Petroleum Corporation

Company:	US ROCKIES REGION PLANNING	**Local Co-ordinate Reference:**	Well NBU 1022-9B4BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**TVD Reference:**	GL 5137 & KB 13 @ 5150.00ft (ENSIGN 145)
Site:	NBU 1022-9A PAD	**MD Reference:**	GL 5137 & KB 13 @ 5150.00ft (ENSIGN 145)
Well:	NBU 1022-9B4BS	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	Denver Sales Office

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,064.00	20.36	236.98	2,952.22	-369.10	-598.14	702.85	1.13	-1.12	-0.26
3,155.00	20.02	237.05	3,037.63	-386.20	-624.48	734.25	0.37	-0.37	0.08
3,245.00	19.14	235.23	3,122.42	-403.00	-649.53	764.39	1.19	-0.98	-2.02
3,336.00	19.38	236.60	3,208.33	-419.81	-674.39	794.39	0.56	0.26	1.51
3,427.00	18.48	234.85	3,294.41	-436.43	-698.79	823.88	1.17	-0.99	-1.92
3,517.00	19.00	238.72	3,379.64	-452.25	-722.97	852.77	1.50	0.58	4.30
3,608.00	18.34	239.69	3,465.85	-467.17	-747.99	881.89	0.80	-0.73	1.07
3,698.00	17.41	238.11	3,551.50	-481.43	-771.65	909.51	1.17	-1.03	-1.76
3,789.00	16.87	239.54	3,638.46	-495.31	-794.59	936.33	0.75	-0.59	1.57
3,879.00	16.62	240.75	3,724.65	-508.22	-817.08	962.24	0.48	-0.28	1.34
3,970.00	15.88	237.58	3,812.01	-521.26	-838.94	987.69	1.27	-0.81	-3.48
4,060.00	13.25	235.72	3,899.11	-533.67	-857.86	1,010.31	2.97	-2.92	-2.07
4,151.00	12.83	243.96	3,987.77	-543.98	-875.56	1,030.79	2.09	-0.46	9.05
4,241.00	10.78	241.99	4,075.87	-552.32	-891.97	1,049.13	2.32	-2.28	-2.19
4,332.00	8.33	243.56	4,165.60	-559.25	-905.39	1,064.18	2.71	-2.69	1.73
4,423.00	6.46	242.02	4,255.84	-564.59	-915.81	1,075.85	2.07	-2.05	-1.69
4,513.00	4.77	245.63	4,345.40	-568.51	-923.69	1,084.62	1.92	-1.88	4.01
4,604.00	3.39	256.38	4,436.17	-570.70	-929.76	1,090.92	1.73	-1.52	11.81
4,694.00	1.80	268.37	4,526.08	-571.37	-933.76	1,094.67	1.86	-1.77	13.32
4,785.00	1.35	289.65	4,617.04	-571.05	-936.19	1,096.58	0.80	-0.49	23.38
4,875.00	1.37	355.66	4,707.02	-569.62	-937.27	1,096.74	1.65	0.02	73.34
4,966.00	1.08	338.36	4,798.00	-567.74	-937.67	1,096.08	0.51	-0.32	-19.01
5,056.00	1.09	341.17	4,887.98	-566.14	-938.26	1,095.74	0.06	0.01	3.12
5,147.00	0.71	349.54	4,978.97	-564.77	-938.64	1,095.34	0.44	-0.42	9.20
5,237.00	0.57	351.22	5,068.97	-563.78	-938.81	1,094.96	0.16	-0.16	1.87
5,328.00	0.47	332.16	5,159.96	-563.00	-939.06	1,094.76	0.22	-0.11	-20.95
5,419.00	0.59	347.40	5,250.96	-562.21	-939.33	1,094.58	0.20	0.13	16.75
5,509.00	0.26	99.07	5,340.96	-561.79	-939.23	1,094.27	0.81	-0.37	124.08
5,600.00	0.49	129.12	5,431.96	-562.07	-938.73	1,093.99	0.32	0.25	33.02
5,690.00	0.67	143.59	5,521.95	-562.74	-938.11	1,093.82	0.26	0.20	16.08
5,781.00	0.54	166.91	5,612.95	-563.58	-937.70	1,093.92	0.30	-0.14	25.63
5,871.00	0.91	184.54	5,702.94	-564.71	-937.66	1,094.48	0.48	0.41	19.59
5,962.00	0.26	240.84	5,793.94	-565.53	-937.90	1,095.11	0.87	-0.71	61.87
6,052.00	0.53	216.76	5,883.93	-565.96	-938.33	1,095.70	0.35	0.30	-26.76
6,143.00	0.70	194.96	5,974.93	-566.84	-938.72	1,096.50	0.31	0.19	-23.96
6,233.00	0.44	42.12	6,064.93	-567.11	-938.63	1,096.57	1.23	-0.29	-169.82
6,324.00	0.53	40.80	6,155.92	-566.53	-938.12	1,095.83	0.10	0.10	-1.45
6,414.00	0.28	77.40	6,245.92	-566.17	-937.64	1,095.23	0.39	-0.28	40.67
6,505.00	0.35	118.85	6,336.92	-566.25	-937.18	1,094.88	0.26	0.08	45.55
6,596.00	0.44	122.36	6,427.92	-566.58	-936.64	1,094.59	0.10	0.10	3.86
6,686.00	0.75	97.39	6,517.91	-566.84	-935.76	1,093.99	0.44	0.34	-27.74
6,777.00	0.77	114.76	6,608.90	-567.17	-934.62	1,093.19	0.25	0.02	19.09
6,867.00	0.74	136.49	6,698.90	-567.84	-933.67	1,092.74	0.32	-0.03	24.14
6,958.00	0.91	150.53	6,789.89	-568.90	-932.91	1,092.65	0.29	0.19	15.43

Scientific Drilling

SDI

Survey Report

Anadarko Petroleum Corporation

Company:	US ROCKIES REGION PLANNING	**Local Co-ordinate Reference:**	Well NBU 1022-9B4BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**TVD Reference:**	GL 5137 & KB 13 @ 5150.00ft (ENSIGN 145)
Site:	NBU 1022-9A PAD	**MD Reference:**	GL 5137 & KB 13 @ 5150.00ft (ENSIGN 145)
Well:	NBU 1022-9B4BS	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	Denver Sales Office

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,048.00	0.70	338.57	6,879.88	-569.01	-932.76	1,092.58	1.78	-0.23	-191.07
7,139.00	0.17	338.46	6,970.88	-568.37	-933.01	1,092.45	0.58	-0.58	-0.12
7,230.00	0.58	7.51	7,061.88	-567.78	-933.00	1,092.14	0.48	0.45	31.92
7,320.00	0.09	75.57	7,151.88	-567.32	-932.87	1,091.78	0.61	-0.54	75.62
7,411.00	0.53	330.93	7,242.88	-566.93	-933.01	1,091.69	0.61	0.48	-114.99
7,501.00	1.23	343.29	7,332.87	-565.64	-933.49	1,091.42	0.80	0.78	13.73
7,592.00	1.23	339.15	7,423.84	-563.79	-934.11	1,090.98	0.10	0.00	-4.55
7,682.00	0.80	320.96	7,513.83	-562.40	-934.85	1,090.87	0.59	-0.48	-20.21
7,773.00	0.78	320.78	7,604.82	-561.43	-935.64	1,091.03	0.02	-0.02	-0.20
7,864.00	0.55	329.85	7,695.82	-560.57	-936.26	1,091.10	0.28	-0.25	9.97
7,954.00	0.49	334.70	7,785.81	-559.85	-936.64	1,091.04	0.08	-0.07	5.39
8,045.00	0.03	250.89	7,876.81	-559.51	-936.83	1,091.02	0.54	-0.51	-92.10
8,135.00	0.29	230.02	7,966.81	-559.66	-937.02	1,091.27	0.29	0.29	-23.19
8,226.00	0.62	177.38	8,057.81	-560.30	-937.18	1,091.74	0.55	0.36	-57.85
8,316.00	0.92	179.72	8,147.80	-561.51	-937.15	1,092.35	0.34	0.33	2.60
8,407.00	0.85	174.10	8,238.79	-562.91	-937.08	1,093.03	0.12	-0.08	-6.18
8,498.00	1.02	155.93	8,329.78	-564.32	-936.68	1,093.44	0.37	0.19	-19.97
8,588.00	1.11	158.55	8,419.76	-565.86	-936.03	1,093.70	0.11	0.10	2.91
8,679.00	1.06	150.31	8,510.74	-567.42	-935.29	1,093.89	0.18	-0.05	-9.05
8,769.00	1.12	137.67	8,600.73	-568.79	-934.29	1,093.76	0.27	0.07	-14.04
8,860.00	1.32	131.15	8,691.71	-570.14	-932.90	1,093.30	0.27	0.22	-7.16
8,950.00	1.32	126.23	8,781.68	-571.43	-931.28	1,092.61	0.13	0.00	-5.47
8,959.00	1.32	123.86	8,790.68	-571.55	-931.11	1,092.52	0.61	0.00	-26.33
LAST SDI MWD PRODUCTION SURVEY									
9,015.00	1.32	123.86	8,846.67	-572.27	-930.04	1,091.99	0.00	0.00	0.00
PROJECTION TO TD									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
130.00	130.00	-0.05	0.37	FIRST SDI MWD SURFACE SURVEY
2,429.00	2,357.11	-254.10	-409.11	LAST SDI MWD SURFACE SURVEY
2,521.00	2,443.88	-270.12	-435.14	FIRST SDI MWD PRODUCTION SURVEY
8,959.00	8,790.68	-571.55	-931.11	LAST SDI MWD PRODUCTION SURVEY
9,015.00	8,846.67	-572.27	-930.04	PROJECTION TO TD

Checked By: _____ Approved By: _____ Date: _____

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US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-9B4BS RED		Spud date: 6/3/2015	
Project: UTAH-UINTAH	Site: NBU 1022-9A PAD		Rig name no.: GWS 1/1
Event: COMPLETION	Start date: 8/31/2015		End date: 9/25/2015
Active datum: RKB @5,150.00usft (above Mean Sea Level)	UWI: NE/NE/0/10/S/22/E/9/0/0/26/PM/N/412/E/0/517/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
8/6/2015	-							
8/31/2015	7:00 - 17:00	10.00	SUBSPR	52	A	P		HSM, 50 PSI ON SURFACE CSG, BLEED OFF, FILL SURFACE & 4 1/2" CSG W/ TMAC MIRU CAMERON TEST TRUCK PRESSURE TEST CSG & FRAC VALVES TO 7038 PSI, LOST 66 PSI IN 15 MIN, NO COMMUNICATION OR MIGRATION WITH SURFACE CSG, BLEED OFF PSI. TEST SURFACE CSG TO 514 PSI, LOST 256 PSI IN 5 MIN.
9/3/2015	7:00 - 17:00	10.00	SUBSPR	37	E	P		HSM, MIRU CUTTERS, FIRST SHOOT AS PER DESIGN
9/8/2015	6:00 - 6:15	0.25	FRAC	48		P		HSM, SLIPS, TRIPS & FALLS
	6:15 - 0:00	17.75	FRAC	36	E	P		P/T LINES & PUMPS TO 8000 PSI FOR 15 MINUTES, LOST 650 PSI FRAC STG # 1) WHP 1589 PSI, BRK 3525 PSI @ 3.5 BPM. ISIP 2625 PSI, FG. 0.74 ISIP 2350 PSI, FG. 0.7, NPI -275 PSI. X/O W/L SET 8K HAL CBP & PERF STG # 2 AS PER DESIGN FRAC STG # 2) WHP 95 PSI, BRK 3011 PSI @ 4.2 BPM. ISIP 1885 PSI, FG. 0.66 ISIP 2450 PSI, FG. 0.72, NPI 565 PSI. X/O W/L SET 8K HAL CBP & PERF STG # 3 AS PER DESIGN
9/9/2015	0:00 - 4:00	4.00	FRAC	36	H	P		FRAC STAGE #3) WHP 1211 PSI, BRK 3132 PSI @ 3.9 BPM. ISIP 1650 PSI, FG. 0.64 ISIP 2715 PSI, FG. 0.76, NPI 1065 PSI.
	4:00 - 9:30	5.50	FRAC	46	E	Z		REPAIRS WIRELINE TRUCK
	9:30 - 0:00	14.50	FRAC	36	E	P		X/O W/L SET 8K HAL CBP & PERF STG # 4 AS PER DESIGN FRAC STG # 4) WHP 279 PSI, BRK 5919 PSI @ 4.3 BPM. ISIP 2290 PSI, FG. 0.72 ISIP 2222 PSI, FG. 0.71, NPI -68 PSI.
9/10/2015	0:00 - 0:00	24.00	FRAC	36	H	P		X/O W/L SET 8K HAL CBP & PERF STG # 5 AS PER DESIGN

RECEIVED: Oct. 23, 2015

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-9B4BS RED		Spud date: 6/3/2015	
Project: UTAH-UINTAH	Site: NBU 1022-9A PAD		Rig name no.: GWS 1/1
Event: COMPLETION	Start date: 8/31/2015		End date: 9/25/2015
Active datum: RKB @5,150.00usft (above Mean Sea Level)	UWI: NE/NE/0/10/S/22/E/9/0/0/26/PM/N/412/E/0/517/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
9/11/2015	0:00 - 0:00	24.00	FRAC	36	H	P		FRAC STG # 5) WHP 617 PSI, BRK 3332 PSI @ 5.6 BPM. ISIP 1625 PSI, FG. 0.65 ISIP 2465 PSI, FG. 0.75, NPI 840 PSI. X/O W/L SET 8K HAL CBP & PERF STG # 6 AS PER DESIGN FRAC STG # 6) WHP 540 PSI, BRK 2471 PSI @ 5.5 BPM. ISIP 1377 PSI, FG. 0.62 ISIP 2499 PSI, FG. 0.77, NPI 1122 PSI.
9/12/2015	0:00 - 0:00	24.00	FRAC	36	H	P		X/O W/L SET 8K HAL CBP & PERF STG # 7 AS PER DESIGN FRAC STG # 7) WHP 867 PSI, BRK 3548 PSI @ 5.7 BPM. ISIP 2691 PSI, FG. 0.8 ISIP 2744 PSI, FG. 0.81, NPI 53 PSI. X/O W/L SET 8K HAL CBP & PERF STG # 8 AS PER DESIGN FRAC STG #8) WHP 451 PSI, BRK 2686 PSI @ 3.8 BPM. ISIP 1391 PSI, FG. 0.64 ISIP 2503 PSI, FG. 0.8, NPI 1112 PSI.
9/13/2015	0:00 - 1:00	1.00	FRAC	34	I	P		SET HAL 8K KILL PLUG AS PER DESIGN TOTAL WATER PUMPED: 12,544 BBLS TOTAL SAND PUMPED: 263,240 SCALE: 290 GAL BIO: 167 GAL
9/24/2015	7:00 - 7:15	0.25	DRLOUT	48		P		HSM, JSA
	7:15 - 9:15	2.00	DRLOUT	30	A	P		SPOT RIG IN & RU. OPEN WELL 0 PSI. ND WH. NU 5K DRL OUT BOP. RU RIG FLOOR & TBG EQUIP. RU PIPE WRANGLER & PIPE RACKS.
	9:15 - 15:00	5.75	DRLOUT	31	I	P		PREP & TALLY NEW 2-3/8 1% CHROME L-80 TBG. PU 3-7/8 BIT, X-DART, POBS (W/ 3 SCREWS), 1.875 XN. RIH W/ 219 JTS, TAG KP @ 6889'. RU DRL EQUIP. SWIFN. READY T/ DRL OUT CBP'S IN THE MORNING.
9/25/2015	7:00 - 7:15	0.25	DRLOUT	48		P		HSM, JSA

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-9B4BS RED		Spud date: 6/3/2015	
Project: UTAH-UINTAH	Site: NBU 1022-9A PAD		Rig name no.: GWS 1/1
Event: COMPLETION	Start date: 8/31/2015		End date: 9/25/2015
Active datum: RKB @5,150.00usft (above Mean Sea Level)	UWI: NE/NE/0/10/S/22/E/9/0/0/26/PM/N/412/E/0/517/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	7:15 - 15:00	7.75	DRLOUT	44	C	P		OPEN WELL 0 PSI. FILL TBG W/ 25 BBLS T-MAC. P/T 5K DRL OUT BOP & FLOW LINES T/ 3000 PSI. GOOD TEST. BLEED OFF PSI. BRK CONV CIRC. BEG DRL OUT. 1st CBP)TAG KP @ 6889'. DRL OUT CBP IN 8 MIN. 50 PSI INCR. CONT RIH. 2nd CBP)TAG PLUG @ 7104'. DRL OUT CBP IN 10 MIN, 150 PSI INCR. CONT RIH. 3rd CBP) TAG PLUG @ 7470'. DRL OUT CBP IN 9 MIN, 600 PSI INCR. CONT RIH. 4th CBP)TAG PLUG @ 7782'. DRL OUT CBP IN 7 MIN, 550 PSI INCR. CONT RIH. 5th CBP)TAG PLUG @ 7968'. DRL OUT CBP IN 10 MIN, 500 PSI INCR. CONT RIH. 6th CBP)TAG PLUG @ 8196'. DRL OUT CBP IN 9 MIN, 550 PSI INCR, CONT RIH. 7th CBP)TAG PLUG @ 8474'. DRL OUT CBP IN 10 MIN, 400 PSI INCR, CONT RIH. 8th CBP)TAG PLUG @ 8724'. DRL OUT CBP IN 11 MIN, 900 PSI INCR, CONT RIH T/ PBTD @ 8956". CIRC WELL CLEAN. RD DRL EQUIP. POOH LD 16 EXESS JTS 2-3/8 L-80 W/ 1% CHROME PU 41/16 TBG HNGR. LAND TBG W/ 269 JTS 2-3/8 1% CHROME L-80 & 1.875 XN & POBS EOT @ 8449.41' RD TBG EQUIP & RIG FLOOR. ND 5K DRL OUT BOP. NU WH. DROP BALL. PSI TEST FLOW LINES T/ HAL T/ 3000 PSI. GOOD TEST. BLEED OFF PSI. PUMP BIT OFF W/ 2400 PSI. LET BIT FALL T/ PBTD. TOTAL LOAD PUMPED = 12,544 BBLS RIG RECOVER = 2,300 BBLS. LEFT T/ RECOVER = 10,244 BBLS. F/ SAMUELS YARD - 286 JTS 2-3/8 L-80 TBG.(1% CHROME) USED IN WELL - 269 JTS SENT T/ SAMUELS YARD - 17 JTS.
	15:00 - 16:00	1.00	DRLOUT	30	C			SLIP DRILL LINE, RD RIG, SDFWE
	16:00 - 16:00	0.00	DRLOUT	50				WELL ON SALES 9/25/2015 @ 10:50 HR - 1.5 MCFD, FCP 1957#, FTP 1644#, 1,920 BWPD, 20/64 CK.

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 1022-9B4BS RED	**Wellbore No.**	OH
Well Name	NBU 1022-9B4BS	**Wellbore Name**	NBU 1022-9B4BS
Report no.	1	**Report date**	9/4/2015
Project	UTAH-UINTAH	**Site**	NBU 1022-9A PAD
Rig Name/No.		**Event**	COMPLETION
Start date	8/31/2015	**End date**	9/25/2015
Spud date	6/3/2015	**Active datum**	RKB @5,150.00usft (above Mean Sea Level)
UWI	NE/NE/0/10/S/22/E/9/0/0/26/PM/N/412/E/0/517/0/0		

1.3 General

Contractor		**Job method**		**Supervisor**	
Perforated Assembly		**Conveyed method**			

1.4 Initial Conditions

Fluid type		**Fluid density**	
Surface press.		**Estimate res press**	
TVD fluid top		**Fluid head**	
Hydrostatic press.		**Press. difference**	
Balance Cond	NEUTRAL		

1.5 Summary

Gross Interval	6,939.0 (usft)-8,916.0 (usft	**Start Date/Time**	9/4/2015 12:00AM
No. of intervals	60	**End Date/Time**	9/4/2015 12:00AM
Total shots	192	**Net perforation interval**	64.00 (usft)
Avg. shot density	3.00 (shot/ft)	**Final surface pressure**	
		Final press. date	

2 Intervals

2.1 Perforated Interval

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD top (usft)	MD base (usft)	Shot density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr type /Stage No	Carr size (in)	Phasing (°)	Charge desc. /Charge manufacturer	Charge weight (gram)	Reason	Misrun	How Guns Conveyed
9/4/2015 12:00AM	M E S A VERDE/			6,939.0	6,940.0	3.00		0.410	/8		120.00		19.00	PRODUCTION		

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD top (usft)	MD base (usft)	Shot density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr type /Stage No	Carr size (in)	Phasing (°)	Charge desc. /Charge manufacturer	Charge weight (gram)	Reason	Misrun	How Guns Conveyed
9/4/2015 12:00AM	M E S A VERDE/			6,950.0	6,951.0	3.00		0.410	/8		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			6,965.0	6,966.0	3.00		0.410	/8		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			7,013.0	7,014.0	3.00		0.410	/8		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			7,025.0	7,026.0	3.00		0.410	/8		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			7,036.0	7,037.0	3.00		0.410	/8		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			7,072.0	7,074.0	3.00		0.410	/8		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			7,248.0	7,249.0	3.00		0.410	/7		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			7,265.0	7,266.0	3.00		0.410	/7		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			7,341.0	7,342.0	3.00		0.410	/7		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			7,394.0	7,395.0	3.00		0.410	/7		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			7,426.0	7,428.0	3.00		0.410	/7		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			7,456.0	7,458.0	3.00		0.410	/7		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			7,523.0	7,524.0	3.00		0.410	/6		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			7,551.0	7,552.0	3.00		0.410	/6		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			7,597.0	7,598.0	3.00		0.410	/6		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			7,630.0	7,631.0	3.00		0.410	/6		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			7,678.0	7,679.0	3.00		0.410	/6		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			7,700.0	7,701.0	3.00		0.410	/6		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			7,736.0	7,737.0	3.00		0.410	/6		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			7,766.0	7,767.0	3.00		0.410	/6		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			7,794.0	7,795.0	3.00		0.410	/5		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			7,808.0	7,809.0	3.00		0.410	/5		120.00		19.00	PRODUCTION		

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD top (usft)	MD base (usft)	Shot density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr type /Stage No	Carr size (in)	Phasing (°)	Charge desc. /Charge manufacturer	Charge weight (gram)	Reason	Misrun	How Guns Conveyed
9/4/2015 12:00AM	M E S A VERDE/			7,828.0	7,829.0	3.00		0.410	/5		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			7,848.0	7,849.0	3.00		0.410	/5		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			7,899.0	7,900.0	3.00		0.410	/5		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			7,925.0	7,926.0	3.00		0.410	/5		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			7,941.0	7,942.0	3.00		0.410	/5		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			7,952.0	7,953.0	3.00		0.410	/5		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			7,989.0	7,990.0	3.00		0.410	/4		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,013.0	8,014.0	3.00		0.410	/4		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,036.0	8,037.0	3.00		0.410	/4		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,076.0	8,077.0	3.00		0.410	/4		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,131.0	8,132.0	3.00		0.410	/4		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,146.0	8,147.0	3.00		0.410	/4		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,160.0	8,161.0	3.00		0.410	/4		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,180.0	8,181.0	3.00		0.410	/4		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,254.0	8,255.0	3.00		0.410	/3		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,273.0	8,274.0	3.00		0.410	/3		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,338.0	8,339.0	3.00		0.410	/3		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,372.0	8,373.0	3.00		0.410	/3		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,414.0	8,415.0	3.00		0.410	/3		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,429.0	8,430.0	3.00		0.410	/3		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,442.0	8,444.0	3.00		0.410	/3		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,491.0	8,492.0	3.00		0.410	/2		120.00		19.00	PRODUCTION		

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD top (usft)	MD base (usft)	Shot density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr type /Stage No	Carr size (in)	Phasing (°)	Charge desc. /Charge manufacturer	Charge weight (gram)	Reason	Misrun	How Guns Conveyed
9/4/2015 12:00AM	M E S A VERDE/			8,512.0	8,513.0	3.00		0.410	/2		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,536.0	8,537.0	3.00		0.410	/2		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,560.0	8,561.0	3.00		0.410	/2		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,598.0	8,599.0	3.00		0.410	/2		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,661.0	8,662.0	3.00		0.410	/2		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,680.0	8,681.0	3.00		0.410	/2		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,693.0	8,694.0	3.00		0.410	/2		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,743.0	8,744.0	3.00		0.410	/1		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,779.0	8,780.0	3.00		0.410	/1		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,798.0	8,799.0	3.00		0.410	/1		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,822.0	8,823.0	3.00		0.410	/1		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,859.0	8,860.0	3.00		0.410	/1		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,869.0	8,870.0	3.00		0.410	/1		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,884.0	8,885.0	3.00		0.410	/1		120.00		19.00	PRODUCTION		
9/4/2015 12:00AM	M E S A VERDE/			8,915.0	8,916.0	3.00		0.410	/1		120.00		19.00	PRODUCTION		

3 Plots